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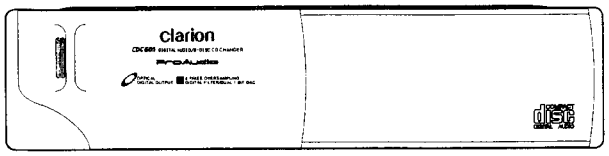
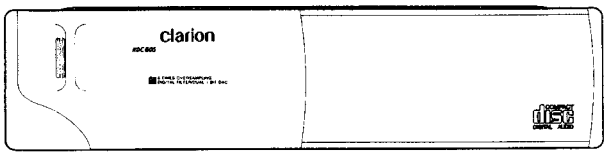


CDC605



RDC605

6DISC COMPACT DISC CHANGER

Model **CDC605** (PE-2116B,E,K)

Model **RDC605** (PE-2116C)

12DISC COMPACT DISC CHANGER

Model **CDC1205** (PE-2117B,E,K)

Model **RDC1205** (PE-2117C)

18DISC COMPACT DISC CHANGER

Model **CDC1805** (PE-2118B,E,K)

SPECIFICATIONS:

◎Common

Sampling Frequency	:44.1kHz
Frequency Response	:5Hz to 20kHz
Dynamic Range	:95dB (1kHz)
Signal-to-Noise Ratio	:105dB(1kHz)
Wow and Flutter	:Unmeasurable
Power Supply	:14.4V(10.8V to 15.6V)
Power Consumption	:Less than 1A

◎6DISC CHANGER

Unit Weight	:268(W)×63(H)×170(D)
External Dimensions	:2.6kg

◎12DISC CHANGER

Unit Weight	:268(W)×98(H)×170(D)
External Dimensions	:3.3kg

◎18DISC CHANGER

Unit Weight	:268(W)×133(H)×170(D)
External Dimensions	:4.0kg

DESTINATION:

◎U.S.A.

Model	Digital-output
CDC605(PE-2116B-A)	○
RDC605(PE-2116C-A)	—
CDC1205(PE-2117B-A)	○
RDC1205(PE-2117C-A)	—
CDC1805(PE-2118B-A)	○

◎EUROPEAN

Model	Digital-output
CDC605(PE-2116E-A)	—
CDC1205(PE-2117E-A)	○
CDC1805(PE-2118E-A)	○

◎OTHER COUNTRY

Model	Digital-output
CDC605(PE-2116K-A)	—
CDC1205(PE-2117K-A)	—
CDC1805(PE-2118K-A)	○

COMPONENTS:

◎PE-2116B-A/PE-2116C-A/PE-2116E-A/PE-2116K-A

Main unit	—	1
CD magzine	CAA-154-101	1
Bracket	300-9700-00	2
Bracket	300-9725-00	2
Extension lead	854-3227-00	1
Parts bag	—	1
Clamp	321-0774-00	1
Lead holder	335-0833-01	2
Machine screw	714-5006-79	1
M6 wing nut	722-0545-00	4
D-sems-hex bolt	734-5008-37	4
Parts bag (Cushion rubber)	921-9278-00	1

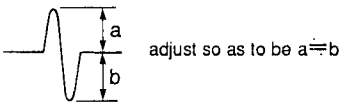
◎PE-2117B-A/PE-2117C-A/PE-2117E-A/PE-2117K-A

Main unit	—	1
CD magzine	CAA-154-101	2
Bracket	300-9701-00	2
Bracket	300-9725-00	2
Extension lead	854-3227-00	1
Parts bag	—	1
Clamp	321-0774-00	1
Lead holder	335-0833-01	2
Machine screw	714-5006-79	1
M6 wing nut	722-0545-00	4
D-sems-hex bolt	734-5008-37	4
Parts bag (Cushion rubber)	921-9278-00	1

◎PE-2118B-A/PE-2118E-A/PE-2118K-A

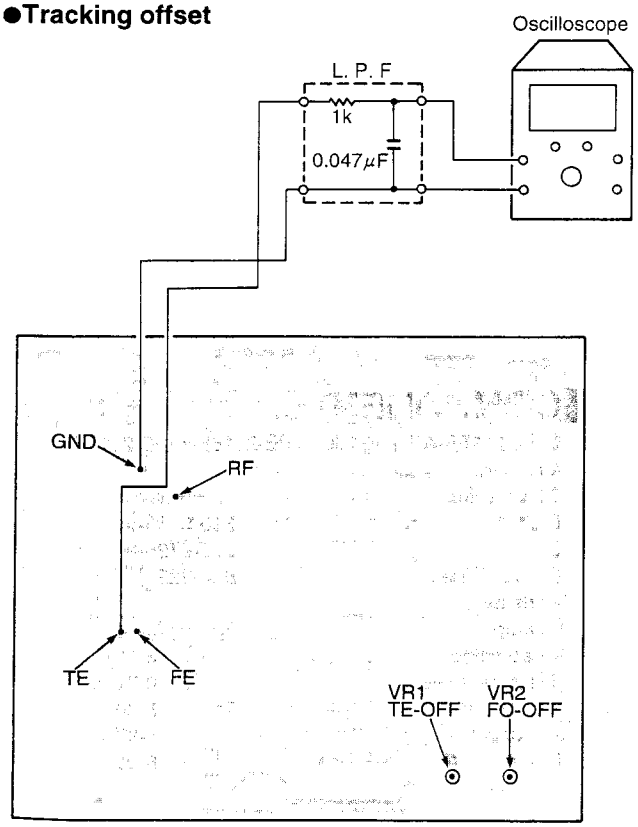
Main unit	—	1
CD magzine	CAA-154-101	3
Bracket	300-9702-00	2
Bracket	300-9725-00	2
Extension lead	854-3227-00	1
Parts bag	—	1
Clamp	321-0774-00	1
Lead holder	335-0833-01	2
Machine screw	714-5006-79	1
M6 wing nut	722-0545-00	4
D-sems-hex bolt	734-5008-37	6
Parts bag (Cushion rubber)	921-9278-00	1

■ADJUSTMENT:

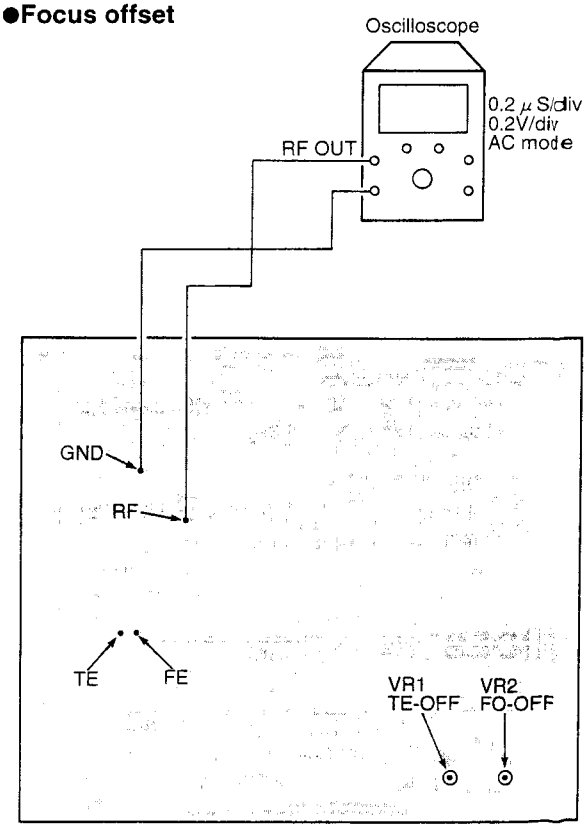
Item	Procedure
Tracking offset	1) Make sure that the power is turned off and connect the measuring instrument as indicated in the below diagram. 2) Playback the first music of SONY TYPE4. 3) Perform the manual search and check the state of TR Jump (track jump)by an oscilloscope. Adjust the tracking offset adjusting volume (VR1) so that the waveform may become symmetrical in both forward and reverse modes.  adjust so as to be a≒b
Focus offset	1) Playback the first music in the normal mode. 2) Connect the RF OUT to the oscilloscope and adjust VR2 so that RF may be maximized and the eye pattern may be optimized.

◎ADJUSTMENT POINT

●Tracking offset



●Focus offset



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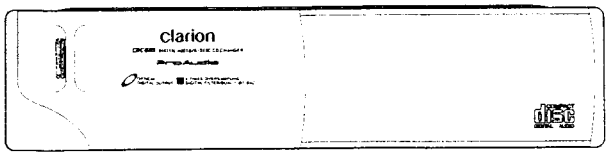


CDC605

RDC605

Model CDC1205 (PE-2117B,E,K)

■SPECIFICATIONS:

◎Common

Sampling Frequency	:44.1kHz
Frequency Response	:5Hz to 20kHz
Dynamic Range	:95dB (1kHz)
Signal-to-Noise Ratio	:105dB(1kHz)
Wow and Flutter	:Unmeasurable
Power Supply	:14.4V(10.8V to 15.6V)
Power Consumption	:Less than 1A

◎6DISC CHANGER

Unit Weight	:268(W)×63(H)×170(D)
External Dimensions	:2.6kg

◎12DISC CHANGER

Unit Weight	:268(W)×98(H)×170(D)
External Dimensions	:3.3kg

◎18DISC CHANGER

Unit Weight	:268(W)×133(H)×170(D)
External Dimensions	:4.0kg

■DESTINATION:

◎U.S.A.

Model	Digital-output
CDC605(PE-2116B-A)	○
RDC605(PE-2116C-A)	—
CDC1205(PE-2117B-A)	○
RDC1205(PE-2117C-A)	—
CDC1805(PE-2118B-A)	○

◎EUROPEAN

Model	Digital-output
CDC605(PE-2116E-A)	—
CDC1205(PE-2117E-A)	○
CDC1805(PE-2118E-A)	○

◎OTHER COUNTRY

Model	Digital-output
CDC605(PE-2116K-A)	—
CDC1205(PE-2117K-A)	—
CDC1805(PE-2118K-A)	○

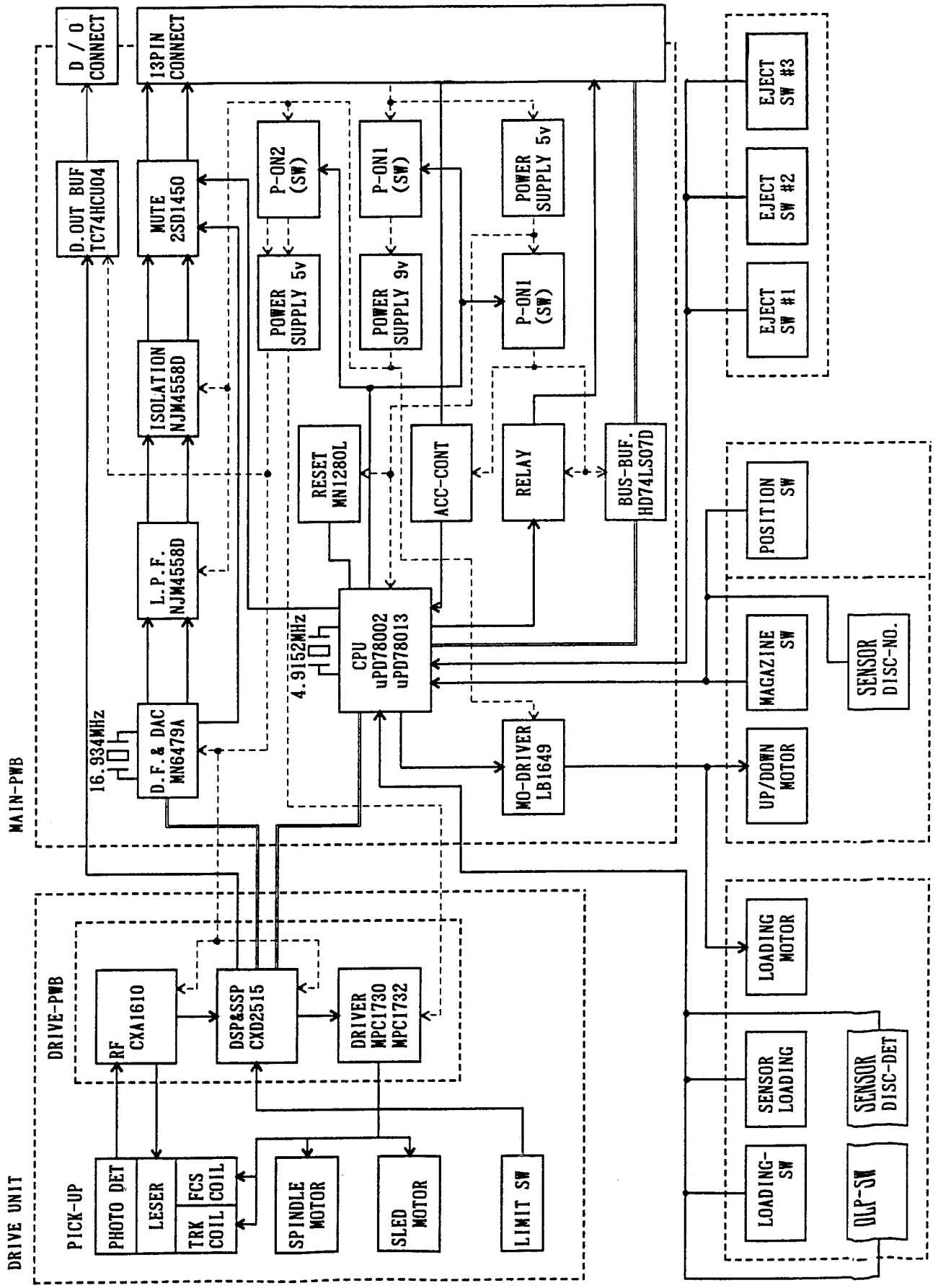
■COMPONENTS:

◎PE-2116B-A/PE-2116C-A/PE-2116E-A/PE-2116K-A

Main unit	—	1
CD magzine	CAA-154-101	1
Bracket	300-9700-00	2
Bracket	300-9725-00	2
Extension lead	854-3227-00	1
Parts bag	—	1
Clamp	321-0774-00	1
Lead holder	335-0833-01	2
Machine screw	714-5006-79	1
M6 wing nut	722-0545-00	4
D-sems-hex bolt	734-5008-37	4
Parts bag (Cushion rubber)	921-9278-00	1

CDC605 RDC605
CDC1205 RDC1205
CDC1805

■BLOCK DIAGRAM:



CDC605 RDC605
CDC1205 RDC1205
CDC1405

■EXPLANATION OF IC:

■ μPD78002BCW-105 052-5009-01
μ PD78013CW-071 052-5010-01 **CD Mechanism Controller**

* The 052-5009-01 is for 6-disc changer type, while the 052-5010-01 is for 12/18-disc changer type. The following description applies to the 052- 5009-01 and the points of difference for the 052-5010-01 are listed at the end.

Outward Form

64-pin plastic DIP

Terminal Description

(052-5009-01)

Pin No.	Symbol	I/O	Function
1	P ON 1	O	Control terminal of System Power 1.When Eject Key is "ON" and magazine has been inserted with Acc Cont terminal (45 pin) held at "H" (Acc Cont from Head Unit at "L") or Acc Cont held in "L" state, set this terminal to "H" to supply power to the entire system.
2	P ON 2	O	Control terminal of System Power 2.With this port set to "H" while in Auto Changer Play, power is supplied to CD IC:CXD2515Q. On a stop, this is set to "L" after spindle motor has stopped and CD IC power is turned off.
3	RELAY	O	Terminal to control Audio Relay of External Changeover Box. Controlled by C-BUS command, in which "H" is output normally while Auto Changer is at Play.
4	$\overline{\text{LDON}}$	O	ON/OFF control output terminal of APC amplifier for laser output control. "L" : laser "ON"
5	$\overline{\text{SRQ}}$	O	C-Bus Service Request output terminal. Set this "H"→ "L" when Slave CPU wants Master to read data which tells a change in state. After address is received from Master, set this "L"→ "H".
6	SSI	I	Input private terminal of C-Bus data line.
7	SSO	O	Output private terminal to C-Bus data line.
8	SCK	I	C-Bus serial clock line input terminal.
9	CLOCK	O	Clock output terminal to transfer serial data to CXD2515Q.
10	XLAT	O	Latch output terminal to serial data supplied to CXD2515Q.
11	DATA	O	Serial data output terminal to control CXD2515Q.
12	SCLK	O	Clock for reading SENS data from CXD2515Q.
13	$\overline{\text{XRST}}$	O	Reset output teminal supplied to CXD2515Q.
14	SENS	I	Input terminal of CDIC internal state output from CXD2515Q. XBUSY : Auto sequencer in operation/ Average in measurement/ Auto gain control in operation (L) FOK : Focus OK (H) GFS : Regenerated frame sink has been obtained in correct timing. (H) SSTOP : Limit SWON (H) OV64 : Spindle motor low-speed rotation detection (H)
15	SQCK	O	Reading clock output terminal for SUB-Q data from CXD2515Q.
16	SQSO	I	Input terminal of SUB-Q data output from CXD2515Q.
17	V_{SS}	–	GND terminal
18 ∫ 21	NC	–	Not in use.
22	$\overline{\text{EJSW 1}}$	I	Eject Key input terminal. With "L" input, magazine eject operation is performed. With Eject Key input when μ-COM is in Stop mode, Stop mode is released and magazine eject operation is carried out. (EJSEL 31pin : at "H")
23 ∫ 26	NC	–	Not in use.

Note: Only new microcomputers are described here.

Pin No.	Symbol	I/O	Function
27 ∫ 30	$\overline{\text{TEST 1}}$ ∫ $\overline{\text{TEST 4}}$	I	TEST MODE 1 (key operation) Select Terminal. With "L" input on CPU start, TEST 1 starts. TEST MODE 2 (PWB CHECK) Select Terminal. With "L" input on CPU start, TEST 2 starts. TEST MODE 3 (DISC CHECK discontinued) Select Terminal. With "L" input on CPU start, TEST 3 starts. Operated, when in TEST 1 or TEST 2, by key input from Pins 27/ 28/ 29/ 30.
31	$\overline{\text{EJSEL}}$	I	Input terminal of Acc OFF" eject selection. With Acc OFF at "H" and with each Eject Key "ON", each eject operation is enabled. With it at "L", the operation is inhibited.
32	V_{SS}	–	GND terminal
33	NC		Not in use.
34	$\overline{\text{LDSW}}$	I	Input terminal of the switch serving to detect that disc has been fully drawn out of magazine and has been completely chucked. "L" : Chucking completed.
35	LODTR	I	Input terminal of photosensor to detect disc load state. "H" : Disc chucked.
36	DETTR	I	Disc detection photosensor input terminal. Detects disc state (if it is provided or not) and also confirms whether disc has been completely pulled out or held inside magazine. "H" : Disc provided. In the course of loading/ unloading.
37	$\overline{\text{DLPSW}}$	I	Input terminal of the switch serving to delect that Mechanism is ready for goint up/down operation. "L" : Operation available
38	NC	–	Not in use
39 40	LDCCW LDCW	O	Output terminal controlling the motor driver for Load/Unload operation of Mechanism.

	Load	Unload	Brake	Stop
LDCCW	"L"	"H"	"H"	"L"
LDCW	"H"	"L"	"H"	"L"

41 42	UDCCW UDCW	O	Output terminal controlling the motor driver for Up/Down operation of Mechanism.

	Up	Down	Brake	Stop
UDCCW	"L"	"H"	"H"	"L"
UDCW	"H"	"L"	"H"	"L"

43	$\overline{\text{RESET}}$	I	RESET input into this IC.
44	SCOR	I	Terminal to input signals from CXD1167 Subcode Sink S0 + S1 output terminal.
45	ACCON	I	Acc Cont input terminal. Acc "ON": "H". With "L" input, μ-COM enters Stop mode where clock is stopped. With "L" → "H" edge detected in that state, Stop mode is cancelled and, on completion of clock oscillation stabilization period, μ-COM enters operation mode.
46	$\overline{\text{MGSW 1}}$	I	Magazine insertion detect SW input terminal. "L" : Inserted state. With μ-COM in Stop mode and with magazine inserted, Stop mode is cancelled for disc checking operation.
47	NC	–	Not in use.
48	V_{DD}	–	Power supply terminal (+5V)
49 50	X 2 X 1	O I	Ceramic resonator connecting terminal for system clock oscillation. (4.91 MHz)
51 ∫ 53	NC	–	Not in use.
54	V_{SS}	–	GND terminal.
55	$\overline{\text{TEMP}}$	I	Input terminal of signals from the temperature detecting circuit.

CDC605 RDC605
CDC1205 RDC1205
CDC1805

■PARTS LIST:

◎MAIN PWB

Note) Several different parts listed in the column are alternative parts. One of those parts is used in the set.

●6DISC CHANGER(PE-2116)

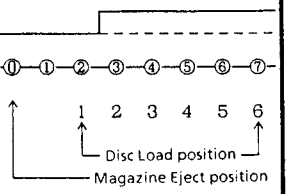
REF NO.	PARTS NO.	DESCRIPTION	QTY
D106,110-112 D118-120	001-0330-00	Diode 1SS119	7
D104,105	001-0377-31	Diode MA4056L	2
D116	001-0377-35	Diode MA4062M	1
D115	001-0377-38	Diode MA4068M	1
D102	001-0377-49	Diode MA4100L	1
D107-109	001-0423-24	Diode MA4091	3
D101	001-0466-00	Diode S5688B	1
D103	001-0567-33	Diode RD5.6JSN3	1
	001-0503-33	Diode HZS6B2L	
S101	013-6100-00	Switch ‡EJECT	1
IC104	051-0160-01	IC HD74L207P	1
IC108,109	051-0422-51	IC NJM4558D	2
IC102	051-0840-10	IC MN1280-L	1
IC105	051-0859-06	IC TC74HCU04AF	1
IC106	051-1408-00	IC LB1649	1
IC107	051-6304-15	IC MN6479A	1
IC101	052-5009-01	IC μPD78002BCW-105	1
X101	060-0319-00	Ceramic resonator 4.1952MHz	1
X102	061-1092-00	Crystal 16.9344MHz	1
Q104	101-1240-50	Transistor 2SB1240Q,R	1
Q108	101-1320-50	Transistor 2SB1320AR,S	1
Q111,113	103-1450-50	Transistor 2SD1450S,T	2
Q102,106	103-1683-50	Transistor 2SD1683S,T	2
Q103,107	103-1858-50	Transistor 2SD1858Q,R	2
Q101,109,112,116	125-0027-01	Transistor UN6111	4
Q105,110,114,117	125-2018-01	Transistor UN6211	4
C115,123	160-1012-05	Ceramic-C 100pF	2
C129	160-1022-05	Ceramic-C 1000pF	1
C135,140	160-1212-05	Ceramic-C 120pF	2
C108,128	172-1031-11	Polyestor-C 0.01 μF	2
C117-122,125,131 C136,141	172-1041-11	Polyestor-C 0.1 μF	10
C101,102,107	173-1021-11	Polyestor-C 1000pF	3
C134,139	173-1821-11	Polyestor-C 1800pF	2
C133,138	173-3321-11	Polyestor-C 3300pF	2
C126,127,143,144	176-1201-00	Ceramic-chip-C 12pF CH	4
C112	178-1042-78	Ceramic-chip-C 0.1 μF	1
C109	042-0452-01	Electro-C 10V220 μF	1
C111	182-2273-13	Electro-C 6.3V220 μF	1
C142	183-1063-31	Electro-C 16V10 μF	1
C105,110,113,114	183-1073-11	Electro-C 6.3V100 μF	4
C103,104,132,137	183-3363-21	Electro-C 10V33 μF	4
C124	183-4763-11	Electro-C 6.3V47 μF	1
C106	184-4773-32	Electro-C 16V470 μF	1

●12DISC CHANGER(PE-2117)

REF NO.	PARTS NO.	DESCRIPTION	QTY
D106,110-112 D118-120	001-0330-00	Diode 1SS119	7
D104,105	001-0377-31	Diode MA4056L	2
D116	001-0377-35	Diode MA4062M	1
D115	001-0377-38	Diode MA4068M	1
D102	001-0377-49	Diode MA4100L	1
D107-109	001-0423-24	Diode MA4091	3
D101	001-0466-00	Diode S5688B	1
D103	001-0567-33	Diode RD5.6JSN3	1
	001-0503-33	Diode HZS6B2L	
S101,102	013-6100-00	Switch ‡EJECT	2
IC104	051-0160-01	IC HD74L207P	1
IC108,109	051-0422-51	IC NJM4558D	2
IC102	051-0840-10	IC MN1280-L	1
IC105	051-0859-06	IC TC74HCU04AF	1
IC106	051-1408-00	IC LB1649	1
IC107	051-6304-15	IC MN6479A	1
IC101	052-5010-01	IC μPD78013CW-071	1
X101	060-0319-00	Ceramic resonator 4.1952MHz	1
X102	061-1092-00	Crystal 16.9344MHz	1
Q104	101-1240-50	Transistor 2SB1240Q,R	1
Q108	101-1320-50	Transistor 2SB1320AR,S	1
Q111,113	103-1450-50	Transistor 2SD1450S,T	2
Q102,106	103-1683-50	Transistor 2SD1683S,T	2
Q103,107	103-1858-50	Transistor 2SD1858Q,R	2
Q101,109,112,116	125-0027-01	Transistor UN6111	4
Q105,110,114,117	125-2018-01	Transistor UN6211	4
C115,123	160-1012-05	Ceramic-C 100pF	2
C129	160-1022-05	Ceramic-C 1000pF	1
C135,140	160-1212-05	Ceramic-C 120pF	2
C108,128	172-1031-11	Polyestor-C 0.01 μF	2
C117-122,125,131 C136,141	172-1041-11	Polyestor-C 0.1 μF	10
C101,102,107	173-1021-11	Polyestor-C 1000pF	3
C134,139	173-1821-11	Polyestor-C 1800pF	2
C133,138	173-3321-11	Polyestor-C 3300pF	2
C126,127,143,144	176-1201-00	Ceramic-chip-C 12pF CH	4
C112	178-1042-78	Ceramic-chip-C 0.1 μF	1
C109	042-0452-01	Electro-C 10V220 μF	1
C111	182-2273-13	Electro-C 6.3V220 μF	1
C142	183-1063-31	Electro-C 16V10 μF	1
C105,110,113,114	183-1073-11	Electro-C 6.3V100 μF	4
C103,104,132,137	183-3363-21	Electro-C 10V33 μF	4
C124	183-4763-11	Electro-C 6.3V47 μF	1
C106	184-4773-32	Electro-C 16V470 μF	1

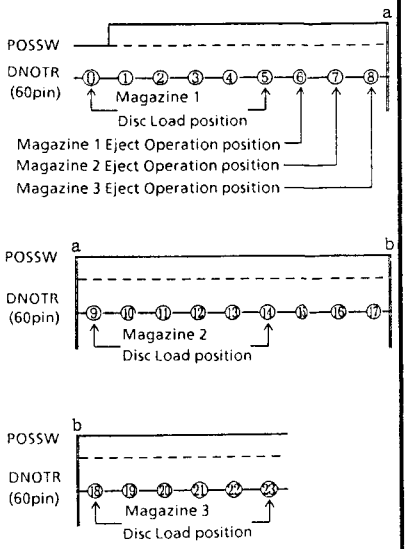
●18DISC CHANGER(PE-2118)

REF NO.	PARTS NO.	DESCRIPTION	QTY
D106,110-113 D118-120	001-0330-00	Diode 1SS119	8
D104,105	001-0377-31	Diode MA4056L	2
D116	001-0377-35	Diode MA4062M	1
D115	001-0377-38	Diode MA4068M	1
D102	001-0377-49	Diode MA4100L	1
D107-109	001-0423-24	Diode MA4091	3
D101	001-0466-00	Diode S5688B	1
D103	001-0567-33	Diode RD5.6JSN3	1
	001-0503-33	Diode HZS6B2L	
S101,102,103	013-6100-00	Switch ‡EJECT	3
IC104	051-0160-01	IC HD74L207P	1
IC108,109	051-0422-51	IC NJM4558D	2
IC102	051-0840-10	IC MN1280-L	1
IC105	051-0859-06	IC TC74HCU04AF	1
IC106	051-1408-00	IC LB1649	1
IC107	051-6304-15	IC MN6479A	1
IC101	052-5010-01	IC μPD78013CW-071	1
X101	060-0319-00	Ceramic resonator 4.1952MHz	1
X102	061-1092-00	Crystal 16.9344MHz	1
Q104	101-1240-50	Transistor 2SB1240Q,R	1
Q108	101-1320-50	Transistor 2SB1320AR,S	1
Q111,113	103-1450-50	Transistor 2SD1450S,T	2
Q102,106	103-1683-50	Transistor 2SD1683S,T	2
Q103,107	103-1858-50	Transistor 2SD1858Q,R	2
Q115	103-1991-50	Transistor 2SD1991AR,S	1
Q101,109,112,116	125-0027-01	Transistor UN6111	4
Q105,110,114,117	125-2018-01	Transistor UN6211	4
C115,123	160-1012-05	Ceramic-C 100pF	2
C129	160-1022-05	Ceramic-C 1000pF	1

PIN NO.	SYMBOL	I/O	FUNCTION
56 ⟆ 58	NC	–	Not in use.
59	POSSW	I	Input terminal of the switch serving to detect reference position for going up/down operation of Mechanism. 
60	$\overline{\text{DNOTR}}$	I	Input terminal of Disc No Detect photosensor. Refer to the column of POSSW (Pin 59).
61	NC	–	Not in use.
62	AMUTE	O	Analog Mute circuit control terminal. Outputs "L" in Play or Manual Search, and cancels Mute. While in Stop or Track Search, outputs "H" and operates Mute.
63	V_{DD}	–	Power supply terminal (+ 5V).
64	V_{SS}	–	GND terminal.

POINTS OF DIFFERENCE

(052-5010-01)

Pin No.	Symbol	I/O	Function
22 ⟆ 24	$\overline{\text{EJSW1}}$ ⟆ $\overline{\text{EJSW3}}$	I	Each Eject Key input terminal. With "L" input, each magazine eject operation is performed. When μ-COM in Stope mode, with each Eject key being input, Stop mode is cancelled and magazine eject operation is performed. (EJSEL Pin 31 : at "H")
25	$\overline{\text{WAKE3}}$	I	Magazine 3 Insertion Wake Up input terminal. When Magazine 3 is inserted in ACC OFF state and "H" → "L" is input, Stop mode of Clock stop is cancelled and Operation mode is started. While in Acc ON, the same logic as that of Pin 57 MGSW3 is input. With Acc turned off with Magazine 3 inserted, Pin 26 CONT3 outputs "L" and this terminal is set to "H" >
26	CONT3	O	Magazine 3 Insertion Wake Up control output terminal. With Magazine 3 inserted and while in Acc OFF, outputs "L". Input of Magazine 3 SW state in Wake 3 of Pin 25 is inhibited. In other states, "H" is output.
33	12/$\overline{18}$	I	Changes over the μ-COM to 12-disc or 18-disc changer control. "H" : 12-disc changer control "L" : 18-disc changer control Incorporated Pull Up terminal.
45	ACCON	I	Acc Cont input terminal. Acc " ON" : "H". With "L" input, μ-COM enters Stop mode with clock stop. With "L" → "H" edge detected in that state, Stop mode is cancelled and, on end of clock oscillation stabilization period, μ-COM moves into Operation mode.
46	$\overline{\text{MGSW 1}}$	I	Magazine 1 Insertion Detect SW input terminal. "L" : inserted state. When μ-COM is in Stop mode, with Magazine 1 inserted, Stop mode is cancelled and disc check operation is performed.
47	$\overline{\text{MGSW 2}}$	I	Magazine 2 Insertion Detect SW input terminal. "L" : inserted state. When μ-COM is in Stop mode, with Magazine 2 inserted, Stop mode is cancelled and disk check operation is performed.
57	$\overline{\text{MGSW 3}}$	I	Magazine 3 Insertion Detect SW input terminal. "L" : inserted state.
59	POSSW	I	Input terminal of the switch detecting the reference position for going up/down of Mechanism.  a POSSW DNOTR (60pin) ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ Magazine 1 Disc Load position Magazine 1 Eject Operation position Magazine 2 Eject Operation position Magazine 3 Eject Operation position a b POSSW DNOTR (60pin) ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ Magazine 2 Disc Load position b POSSW DNOTR (60pin) ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ Magazine 3 Disc Load position

CDC505 RDC605
CDC2005 RDC1205
CDC3005

REF NO.	PARTS NO.	DESCRIPTION	QTY
C135,140	160-1212-05	Ceramic-C 120pF	2
C108,128	172-1031-11	Polyestor-C 0.01 μF	2
C117-122,125,130 C131,136,141	172-1041-11	Polyestor-C 0.1 μF	11
C101,102,107	173-1021-11	Polyestor-C 1000pF	3
C134,139	173-1821-11	Polyestor-C 1800pF	2
C133,138	173-3321-11	Polyestor-C 3300pF	2
C126,127,143,144	176-1201-00	Ceramic-chip-C 12pF CH	4

REF NO.	PARTS NO.	DESCRIPTION	QTY
C112	178-1042-78	Ceramic-chip-C 0.1 μF	1
C109	042-0452-01	Electro-C 10V220 μF	1
C111	182-2273-13	Electro-C 6.3V220 μF	1
C142	183-1063-31	Electro-C 16V10 μF	1
C105,110,113,114	183-1073-11	Electro-C 6.3V100 μF	4
C103,104,132,137	183-3363-21	Electro-C 10V33 μF	4
C124	183-4763-11	Electro-C 6.3V47 μF	1
C106	184-4773-32	Electro-C 16V470 μF	1

◎LED PWB

REF NO.	PARTS NO.	DESCRIPTION	QTY
D201,202	001-0563-00	Diode GL380	2
S201	013-7001-00	Switch	1

REF NO.	PARTS NO.	DESCRIPTION	QTY
S202	013-3988-00	Switch	1

◎PHOTO PWB

REF NO.	PARTS NO.	DESCRIPTION	QTY
Q201,202	060-0252-01	Photo Transistor	2

◎CONECT PWB

REF NO.	PARTS NO.	DESCRIPTION	QTY
S203,206	013-3906-00	Switch	2

REF NO.	PARTS NO.	DESCRIPTION	QTY
PT201	051-5801-00	IC GP1S53V	1

◎MG12 PWB (PE-2117)

REF NO.	PARTS NO.	DESCRIPTION	QTY
S204	013-7201-00	Switch	1

◎MG18 PWB (PE-2118)

REF NO.	PARTS NO.	DESCRIPTION	QTY
S204,205	013-7201-00	Switch	2

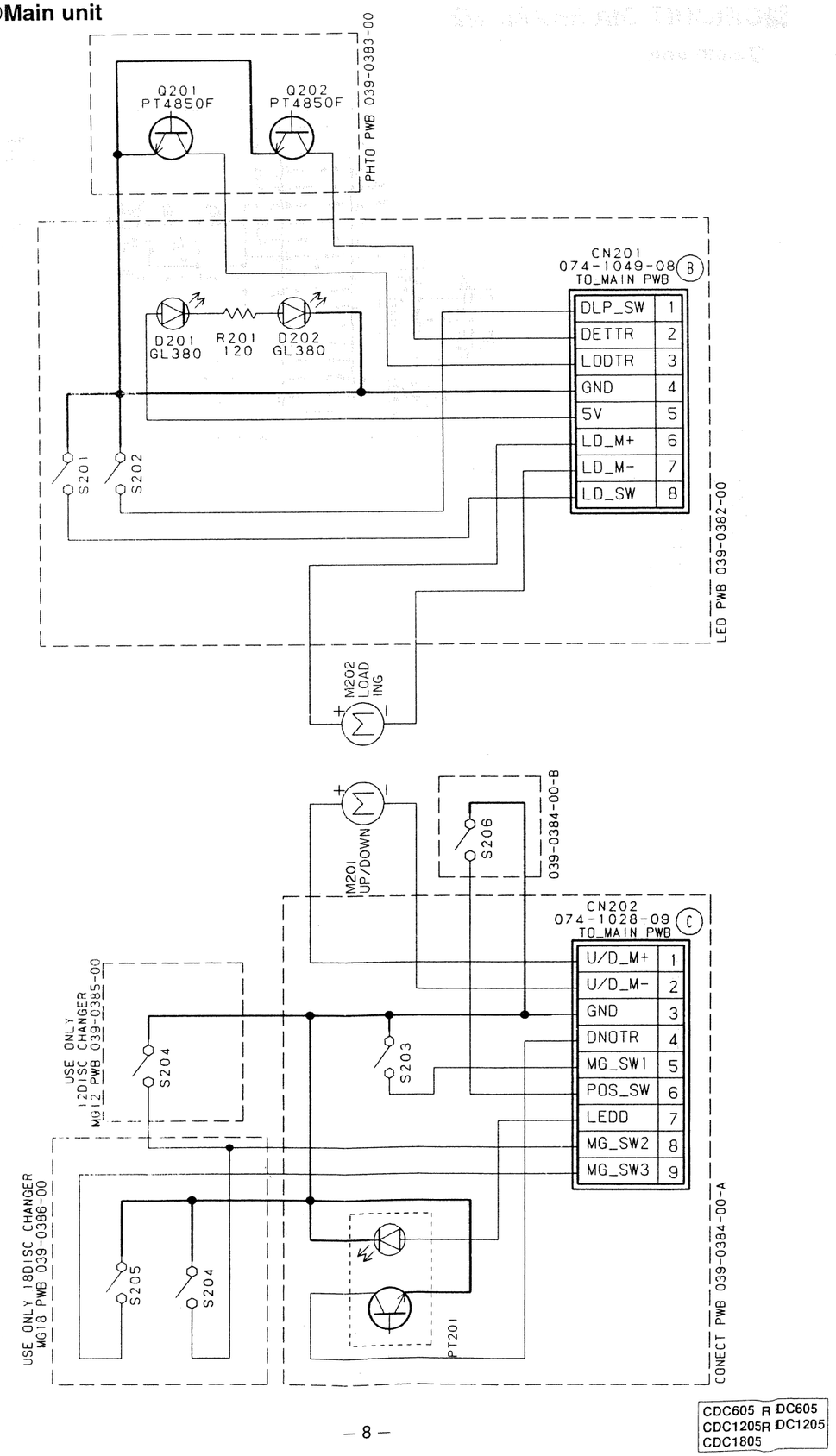
◎DRIVE PWB

REF NO.	PARTS NO.	DESCRIPTION	QTY
L1	010-2155-43	Coil 10 μH	2
VR1,2	012-4431-09	Variable resistor 47kΩ	2
S1	013-3808-11	Switch	1
IC4	051-0858-05	IC TC74HC02AF	1
IC1	051-1971-00	IC CXA1610M	1
IC2	051-6003-05	IC MPC1730M	1
IC3	051-6004-05	IC MPC1732M	1
IC5	051-6305-00	IC CXD2515Q	1
Q1	101-1188-50	Transistor 2SB1188Q,R	1
C3	176-1007-00	Chip-C 10pF CH	1
C34	176-1201-00	Chip-C 12pF CH	1
C2	176-2096-00	Chip-C 2pF CH	1

REF NO.	PARTS NO.	DESCRIPTION	QTY
C4,7,9-12,15,17 C19,22-24,30,33 C35	178-1032-78	Chip-C 0.01 μF	16
C28	178-1042-78	Chip-C 0.1 μF	1
C25	178-1522-78	Chip-C 1500pF	1
C27,29	178-2212-78	Chip-C 220pF	2
C26	178-4732-78	Chip-C 0.047 μF	1
C21	042-0397-03	Tan-chip-C 25V0.47 μF	1
C5,6,8,13,14,18 C20	042-0423-03	Tan-chip-C 6.3V6.8 μF	7
C1,16	183-1073-12	Electro-C 6.3V100 μF	2
C31	183-4763-11	Electro-C 6.3V47 μF	1

■CIRCUIT DIAGRAM: 1/2

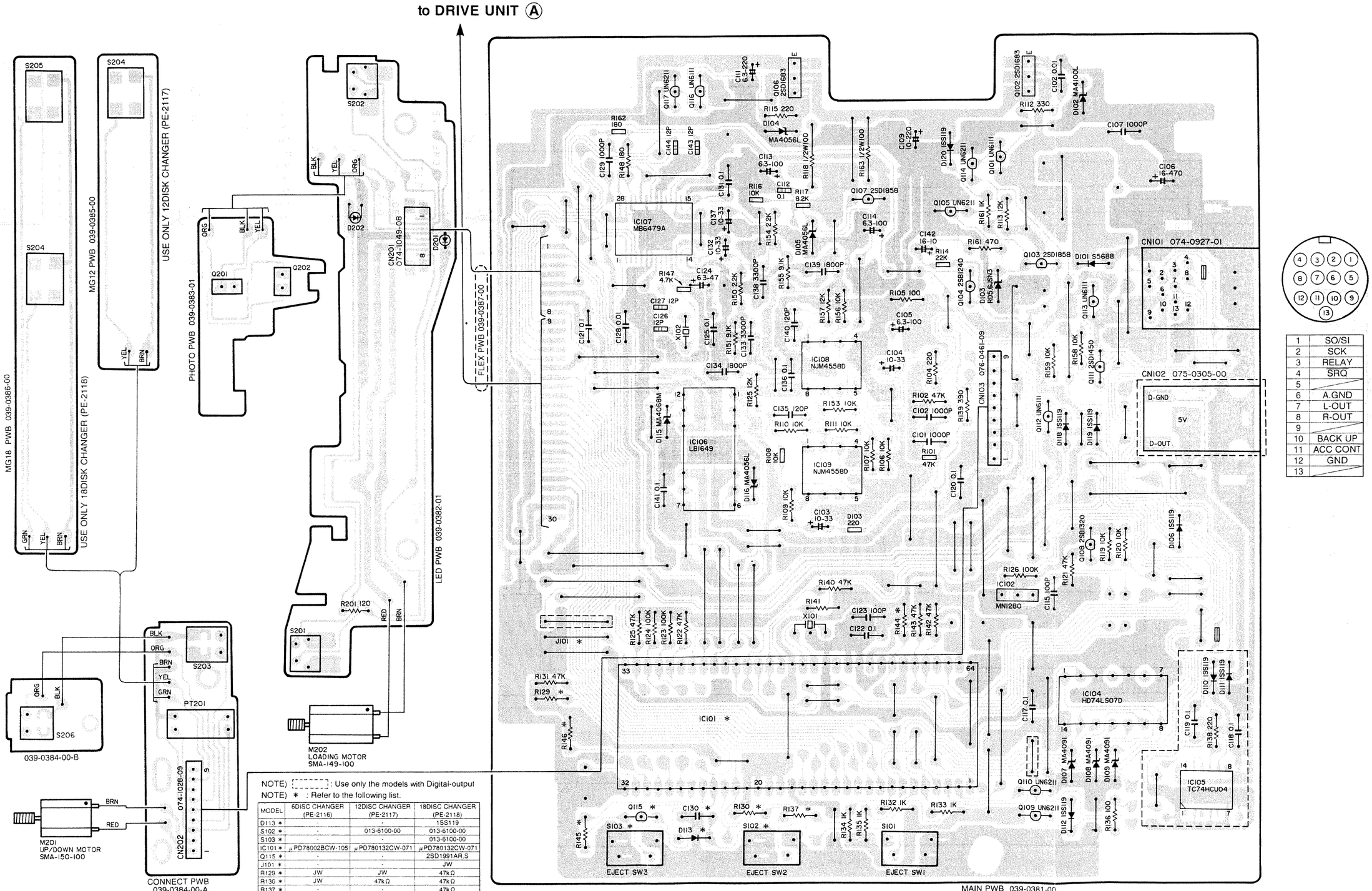
◎Main unit



CDC605 R DC605
CDC1205R DC1205
CDC1805

■PRINTED WIRING BOARD:

◎Main unit



1	SO/SI
2	SCK
3	RELAY
4	SRQ
5	
6	A.GND
7	L-OUT
8	R-OUT
9	
10	BACK UP
11	ACC CONT
12	GND
13	

NOTE) [- - -] : Use only the models with Digital-output

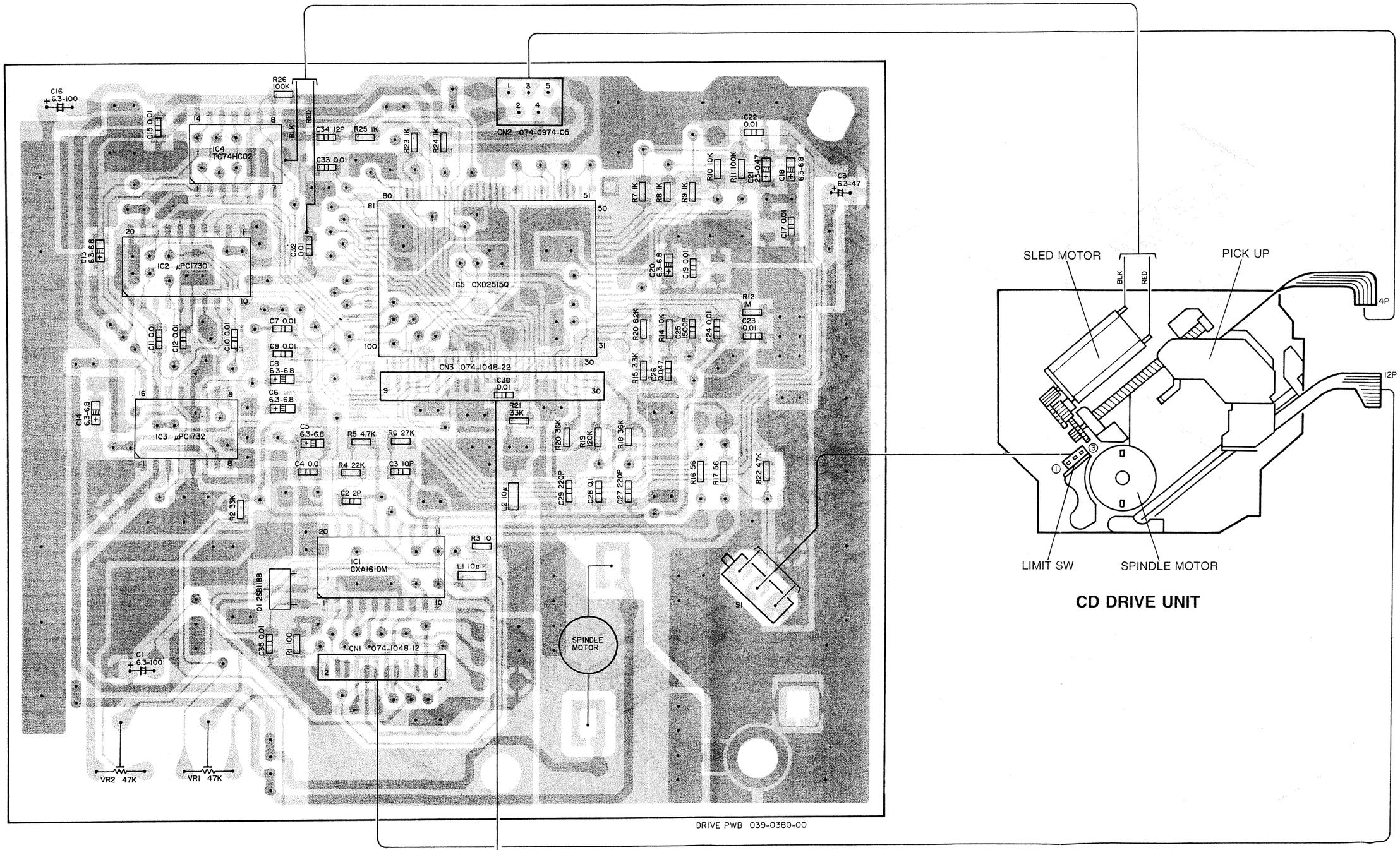
NOTE) * : Refer to the following list.

MODEL	6DISC CHANGER (PE-2116)	12DISC CHANGER (PE-2117)	18DISC CHANGER (PE-2118)
D113 *	-	-	1SS119
S102 *	-	013-6100-00	013-6100-00
S103 *	-	-	013-6100-00
IC101 *	μPD78002BCW-105	μPD780132CW-071	μPD780132CW-071
Q115 *	-	-	2SD1991AR,S
J101 *	-	-	JW
R129 *	JW	JW	47kΩ
R130 *	JW	47kΩ	47kΩ
R137 *	-	-	47kΩ
R141 *	JW	47kΩ	47kΩ
R144 *	JW	JW	47kΩ
R145 *	-	-	-
R146 *	JW	JW	47kΩ
C130 *	-	-	47kΩ

CDC605 FDC605
CDC1205 FDC1205
CDC1805

■PRINTED WIRING BOARD:

◎Drive unitt

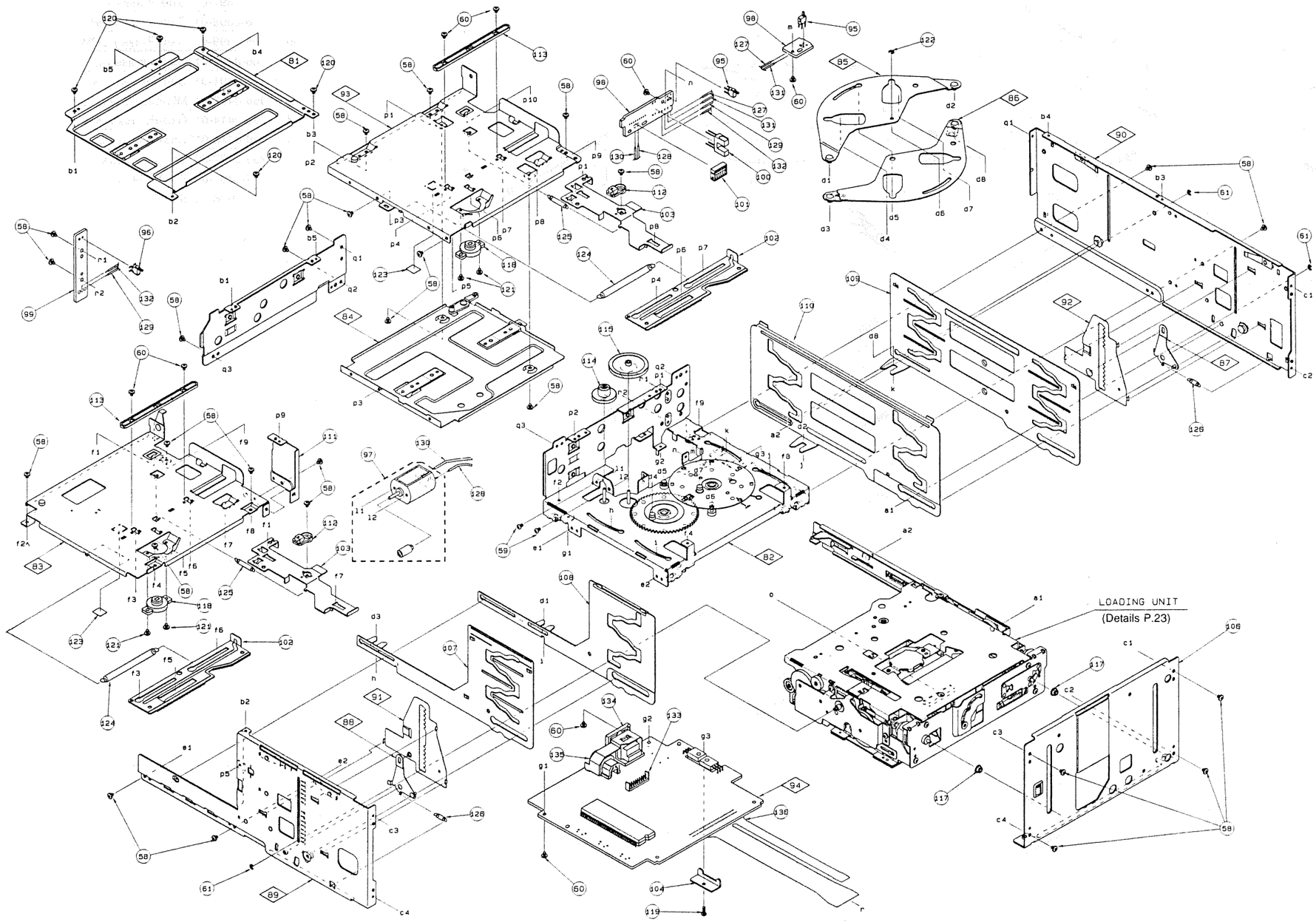


CD DRIVE UNIT

to MAIN UNIT Ⓐ

■EXPLODED VIEW · PATS LIST:

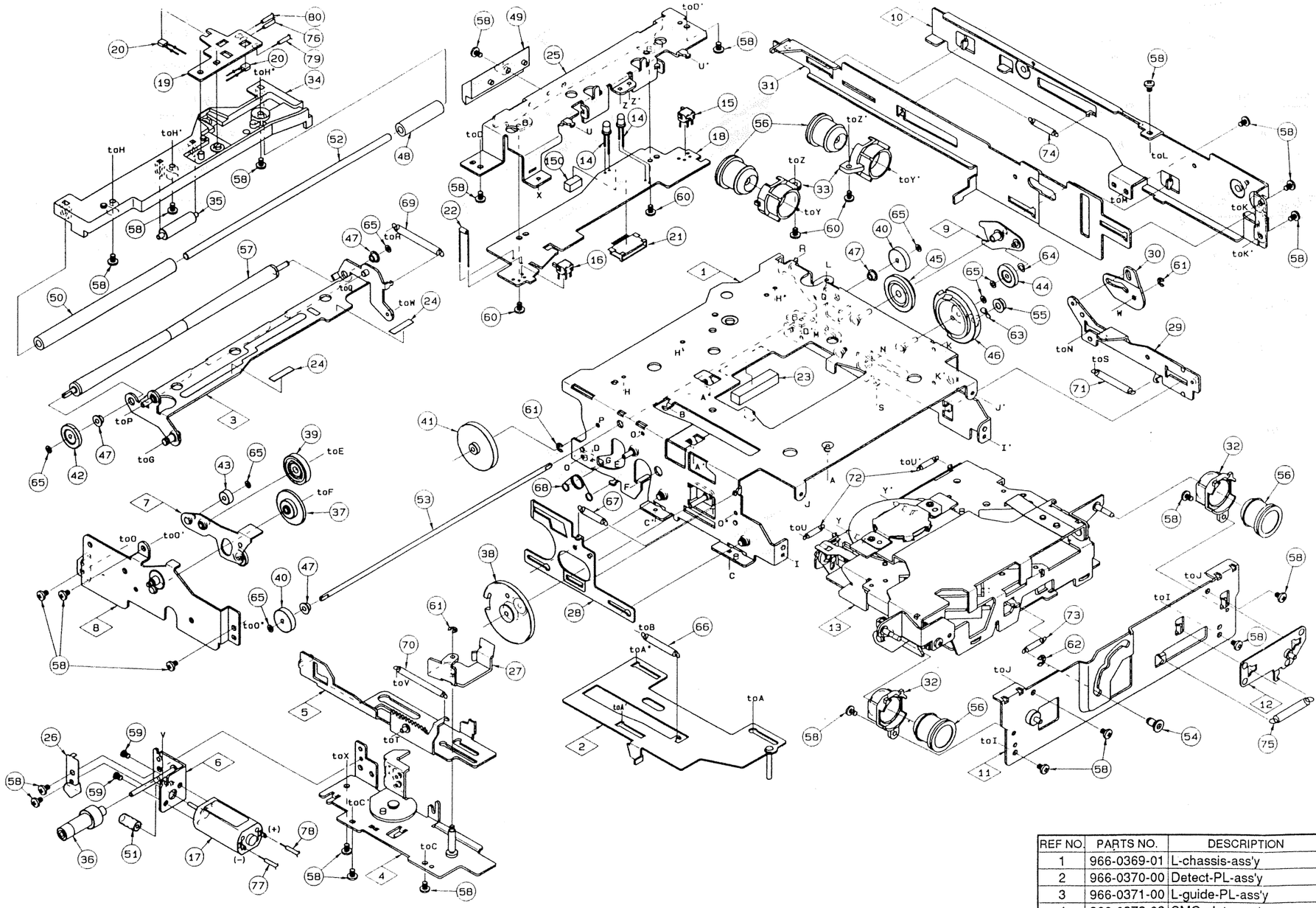
◎CD mechanism 12DISC CHANGER (929-0071-00, 929-0071-01)



REFNO.	PARTS NO.	DESCRIPTION	QTY
58	714-2003-81	Machine screw	49
60	716-1716-00	Screw	14
81	966-0388-01	Upper-PL-ass'y	1
82	966-0390-01	V-chassis-ass'y	1
83	966-0392-01	MG-base-ass'y-1	1
84	966-0394-01	MG-UP-P-ass'y-1	1
85	966-0398-01	Cam-P-ass'y-UP	1
86	966-0399-01	Cam-P-ass'y-LOW	1
87	966-0400-01	Gap link-ass'y-L	1
88	966-0401-01	Gap link-ass'y-R	1
89	966-0403-01	Side-P-ass'y-R12	1
90	966-0404-01	Side-P-ass'y-L12	1
91	966-0416-01	Gap-PL-ass'y-R12	1
92	966-0417-01	Gap-PL-ass'y-L12	1
93	966-0427-00	MG-base-ass'y-18	1
94	039-0381-00	PWB (MAIN)	1
95	013-3906-00	Switch	2
96	013-7201-00	Switch	1
97	SMA-150-100	Motor ass'y (UP/DOWN)	1
98	039-0384-00	PWB (CONECT)	1
99	039-0385-00	PWB (MG12)	1
100	051-5801-00	IC (GP1S53V)	1
101	074-1028-09	Outlet socket	1
102	620-0622-01	MG-eject plate	2
103	620-0627-00	MG-lock plate	2
104	620-0628-00	Heat sink	1
105	620-0637-01	Front panel-12	1
106	620-0638-01	Rear panel-18	1
107	620-0639-01	Slide-PL-RA-12	1
108	620-0640-01	Slide-PL-RB-12	1
109	620-0641-01	Slide-PL-LA-12	1
110	620-0642-01	Slide-PL-LB-12	1
111	620-0645-01	Support plate-12	1
112	621-0149-01	MG-stopper	2
113	621-0324-01	MG-guide rail	2
114	621-0325-01	V-helical gear	1
115	621-0326-01	V-gear A	1
117	622-1246-01	Rear-P-roller	2
118	629-0056-10	Gear damper	2
119	714-2006-81	Machine screw	1
120	716-0484-02	Screw	5
121	739-2030-17	Precision screw	4
122	743-2000-20	E-ring	1
123	746-0874-00	Washer	2
124	750-3161-01	MG-eject spring	2
125	750-3162-00	MG-lock spring	2
126	750-3163-00	Gap link spring	2
127	800-4908-60	Vinyl-coat-wire	1
128	801-4906-60	Vinyl-coat-wire	1
129	801-4910-60	Vinyl-coat-wire	1
130	802-4906-60	Vinyl-coat-wire	1
131	803-4908-60	Vinyl-coat-wire	1
132	804-4910-60	Vinyl-coat-wire	1
133	076-0461-09	Conector (9PIN)	1
134	074-0927-01	Outlet socket (13PIN)	4
135	075-0305-00	Jack (Digital output)	1
136	039-0387-00	PWB (FLEX)	1

■EXPLODED VIEW · PATS LIST:

◎Loading unit



REF NO.	PARTS NO.	DESCRIPTION	QTY
1	966-0369-01	L-chassis-ass'y	1
2	966-0370-00	Detect-PL-ass'y	1
3	966-0371-00	L-guide-PL-ass'y	1
4	966-0372-02	SMG-plate-ass'y	1
5	966-0374-00	Shift-PL-ass'y	1
6	966-0375-00	L-motor-PL-ass'y	1
7	966-0376-01	Mode-CH-ass'y	1
8	966-0377-01	Side-PL-R-ass'y	1
9	966-0378-01	Disc-CH-ass'y	1
10	966-0379-01	Side-PL-L-ass'y	1
11	966-0380-01	Rear-PL-ass'y	1
12	966-0381-00	V-hold-P-ass'y	1

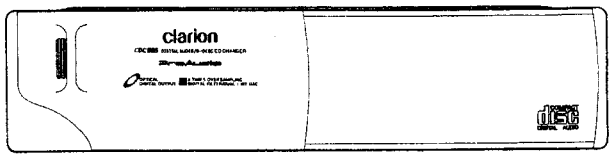
REF NO.	PARTS NO.	DESCRIPTION	QTY
13	968-0070-00	Drive unit (Details;P.25)	1
14	001-0563-00	LED	2
15	013-3988-00	Switch	1
16	013-7001-00	Switch	1
17	SMA-149-100	Motor-ass'y (LOADING)	1
18	039-0382-01	PWB (LED)	1
19	039-0383-01	PWB (PHOTO)	1
20	060-0252-01	Photo-Transistor	2
21	074-1049-08	Outlet socket (8P)	1
22	111-1211-91	Film-R (1/4W 120)	1
23	345-7624-01	Clamper-H-sheet	1
24	345-7655-00	L-guide sheet	2
25	620-0575-01	Front plate	1
26	620-0581-00	L-motor-H-plate	1
27	620-0582-01	Lock link-RR	1
28	620-0583-00	Mode plate	1
29	620-0587-01	Lock plate-L	1
30	620-0588-00	Joint link	1
31	620-0589-01	Disc-L-plate	1
32	621-0200-02	DMP-holder-A-DL	2
33	621-0250-01	Dmaper holder	2
34	621-0304-01	Upper guide	1
35	621-0305-01	UG-roller B	1
36	621-0306-01	P-gear A	1
37	621-0307-01	P-gear B	1
38	621-0308-01	P-gear C	1
39	621-0309-01	J-gear A	1
40	621-0310-01	J-gear B	2
41	621-0311-01	R-gear A	1
42	621-0312-01	R-gear B	1
43	621-0313-01	I-gear B	1
44	621-0314-01	I-gear C	1
45	621-0315-01	K-gear A	1
46	621-0316-01	K-gear B	1
47	621-0317-01	RO-sleeve	4
48	621-0318-01	Guide roller	1
49	621-0345-00	Front cover	1
50	621-0346-00	Guide roller-B	1
51	345-7666-00	PWB sheet	1
52	622-1247-00	UG-roller shaft	1
53	622-1248-00	UP-roller shaft	1
54	622-1249-00	Spring-H-pin	1
55	622-1271-01	K-GB-roller	1
56	629-0047-01	Damper-DL	4
57	629-0054-00	Loading roller	1
58	714-2003-81	Machine screw	24
59	716-1468-00	Screw	4
60	716-1716-00	Screw	4
61	743-1500-20	E-ring	6
62	743-2500-20	E-ring	1
63	745-0748-01	Washer	1
64	746-0712-03	Washer	1
65	746-0761-00	Washer	7
66	750-3150-00	Detect-PL-SP	1
67	750-3151-00	Mode-PL-spring	1
68	750-3152-01	L-guide-SP-R	1
69	750-3153-00	L-guide-SP-L	1
70	750-3154-01	Shift-PL-spring	1
71	750-3155-00	Lock-PLL-spring	1
72	750-3156-00	Drive-SP-F	2
73	750-3157-01	Drive-SP-R	1
74	750-3159-00	DLP-spring	1
75	750-3166-00	V-hold spring	1
76	800-4910-60	Vinyl-coat-wire	1
77	801-4916-60	Vinyl-coat-wire	1
78	802-4916-60	Vinyl-coat-wire	1
79	803-4910-60	Vinyl-coat-wire	1
80	804-4910-60	Vinyl-coat-wire	1

V1281e

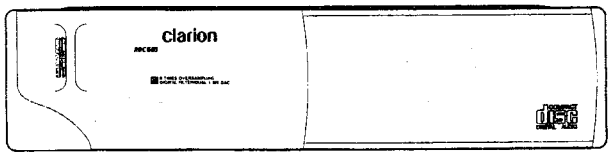
Clarion Co., Ltd. Export Division- 22-3, Shibuya 2-chome, Shibuyaku, Tokyo, 150 Japan Tel: 03-3400-1121 Fax: 03-3400-8679 Telex: J22908, J22152
Service Dept.- 50 kamitoda,Toda-shi,Saitama,335 Japan Tel: 048-443-1111 Fax: 048-433-6996

clarion Service Manual

Published by Service Dept.



CDC605



RDC605

6DISC COMPACT DISC CHANGER

Model CDC605
(PE-2116B,E,K)

Model RDC605
(PE-2116C)
(S/No.305,401~)

12DISC COMP. DISC CHANGER

Model CDC1205
(PE-2117B,E,K)

Model RDC1205
(PE-2117C)
(S/No. 78,401~)

18DISC COMP. DISC CHANGER

Model CDC1805
(PE-2118B,E,K)
(S/No. 14,451~)

■ ORIGINAL SERVICE MANUAL

This additional service manual is designed to be used together with Model CDC605/1205/1805

Original model	Manual No.
CDC605/1205/1805	298-5205-00

■ SPECIFICATIONS

Common

Sampling Frequency: 44.1kHz
Frequency Response: 5Hz to 20kHz
Dynamic Range: 95dB(1kHz)
Signal-to-Noise Ratio: 105dB(1kHz)
Wow and Flutter: Unmeasurable
Power Supply: 14.4V(10.8V to 15.6V)
Power Consumption: Less than 1A

6DISC CHANGER

Unit Weight: 2.6kg
External Dimension(mm): 268(W)×63(H)×170(D)

12DISC CHANGER

Unit Weight: 3.3kg
External Dimension(mm): 268(W)×98(H)×170(D)

18DISC CHANGER

Unit Weight: 4.0kg
External Dimension(mm): 268(W)×133(H)×170(D)

■ DESTINATION

U.S.A.

Model	Digital-output
CDC605(PE-2116B-A)	○
RDC605(PE-2116C-A)	—
CDC1205(PE-2117B-A)	○
RDC1205(PE-2117C-A)	—
CDC1805(PE-2118B-A)	○

EUROPEAN

Model	Digital-output
CDC605(PE-2116E-A)	—
CDC1205(PE-2117E-A)	○
CDC1805(PE-2118E-A)	○

OTHER COUNTRY

Model	Digital-output
CDC605(PE-2116K-A)	—
CDC1205(PE-2117K-A)	—
CDC1805(PE-2118K-A)	○

 Printed in Japan 298-5555-00 NOV.1996 P

■ CHANGE FROM ORIGINAL MODEL

1.Drive unit of CD mechanism
2.MAIN P.W.B.

■ COMPONENTS

PE-2116B,C,E,K-A

Main unit	————	1
CD Magazine	CAA-154-101	1
Bracket	300-9700-00	2
Bracket	300-9725-00	2
Extension lead	854-3227-00	1
Parts bag		
Clamp	321-0774-00	1
Lead holder	335-0833-01	2
Machine screw	714-5006-79	1
M6 wing nut	722-0545-00	4
D-sems-hexagon bolt	734-5008-37	4
Parts bag(Cushion rubber)	921-9278-00	1

PE-2117B,C,E,K-A

Main unit	————	1
CD Magazine	CAA-154-101	2
Bracket	300-9700-00	2
Bracket	300-9725-00	2
Extension lead	854-3227-00	1
Parts bag		
Clamp	321-0774-00	1
Lead holder	335-0833-01	2
Machine screw	714-5006-79	1
M6 wing nut	722-0545-00	4
D-sems-hexagon bolt	734-5008-37	4
Parts bag(Cushion rubber)	921-9278-00	1

PE-2118B,E,K-A

Main unit	————	1
CD Magazine	CAA-154-101	3
Bracket	300-9700-00	2
Bracket	300-9725-00	2
Extension lead	854-3227-00	1
Parts bag		
Clamp	321-0774-00	1
Lead holder	335-0833-01	2
Machine screw	714-5006-79	1
M6 wing nut	722-0545-00	4
D-sems-hexagon bolt	734-5008-37	6
Parts bag(Cushion rubber)	921-9278-00	1

■ To engineers in charge of repair or inspection of our products.

Before repair or inspection,make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.
   The system uses parts with special safety features against fire and voltage.Use only parts with equivalent characteristics when replacing them.
   The use of unspecified parts shall be regarded as remodeling for which we shall not be liable.The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.
2. Place the parts and wiring back in their original positions after replacement or re-wiring.
   For proper circuit construction,use of insulation tubes,bonding,gaps to PWB,etc,is involved.The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts.Ensure that they are placed back in their original positions after repair or inspection.
   If extended damage is caused due to negligence during repair,the legal responsibility shall be with the repairing company.
3. Check for safety after repair.
   Check that the screws,parts and wires are put back securely in their original position after repair.Ensure for safety reasons there is no possibility of secondary ploblems around the repaired spots.
   If extended damage is caused due to negligence of repair,the legal responsibility shall be with the repairing company.
4. Caution in removal and making wiring connection to the parts for the automobile.
   Disconnect the battery terminal after turning the ignition key off.If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur.If extensive damage is caused due to negligence of repair,the legal responsibility shall be with the repairing company.
5. Cautions regarding chips.
   Do not reuse removed chips even when no abnormality is observed in their appearance.Always replace them with new ones.(The chip parts include resistors,capacitors,diodes,transistors,etc).The negative pole of tantalum capacitors is highly susceptible to heat,so use special care when replacing them and check the operation afterwards.
6. Cautions in handling flexible PWB
   Before working with a soldering iron,make sure that the iron tip temperature is around 270℃.Take care not to apply the iron tip repeatedly(more than three times)to the same patterns.Also take care not to apply the tip with force.
7. Turn the unit OFF during disassembly and parts replacement.Recheck all work before you apply power to the unit.
8. Cautions in checking that the optical pickup lights up.
   The laser is focused on the disc reflection surface through the lens of the optical pickup. When checking that the laser optical diode lights up,keep your eyes more than 30cms away from the lens.Prolonged viewing of the laser within 30cms may damage your eyesight.
9. Cautions in handling the optical pickup
   The laser diode of the optical pickup can be damaged by electrostatic charge caused by your clothes and body.Make sure to avoid electrostatic charges on your clothes or body,or discharge static electricity before handling the optical pickup.

■ EXPLANATION OF IC

■ μPD78013CW-080 052-5014-00
μPD78013CW-081 052-5015-00 CD mechanism controller

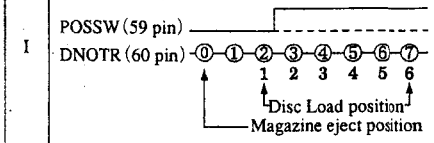
* 052-5014-00 is for 6-CD changer type and 052-5015-00 is for 12-/18-CD changer type.
The following is for 052-5014-00. Unique points for 052-5015-00 are described at the end.

Outward Form

64 pins, plastic DIP

Terminal Description (052-5014-00)

No.	Symbol	I/O	Function
1	P-ON 1	O	System Power 1 control terminal When ACC control terminal (45 pin) is "H" (ACC control from the head unit is "L"), or when ACC control terminal is "L," the eject key is "ON," and when the magazine is inserted, this terminal becomes "H" and supplies power to the system.
2	P-ON 2	O	System Power 2 control terminal This port becomes "H" when the auto changer is ON and supplies power to CD 1C: CXD2545. Turns to "L" after spindle motor stops in stop mode, and turns off the power of CD 1C.
3	RELAY	O	Terminal to control audio relay of external switch box Controlled by C-BUS command. Normally "H" is output when the auto changer is in play mode.
4	$\overline{\text{LD ON}}$	O	APC amplifier ON/OFF control output terminal for laser output control "L": Laser "ON"
5	$\overline{\text{SRQ}}$	O	C-BUS/service request output terminal When the slave CPU wants the master to read the data to inform status change, "H" is changed to "L." After receiving the address from the master, "L" is changed to "H."
6	SSI	I	C-BUS data line input exclusive terminal
7	SSO	O	Output exclusive terminal to C-BUS data line
8	SCK	I	C-BUS serial clock line input terminal
9	CLOK	O	Clock output terminal for serial data transmission for CXD2545
10	XLAT	O	Latch output terminal for serial data to CXD2545
11	DATA	O	Serial data output terminal to control CXD2545
12	SCLK	O	Clock to read SENS data from CXD2545
13	$\overline{\text{XRST}}$	O	Reset output terminal to CXD2545
14	SENS	I	Input terminal of CDIC inside condition output from CXD2545 XBUSY: When auto sequencer is under operation, the average is being measured. Auto gain control is under operation (L) FOK: Focus OK (H) GFS: Played frame sink was obtained in a correct timing (H) SSTOP: Limit SW ON (H) OV64: Spindle motor low speed rotation detection (H)
15	SQCK	O	SUB-Q data reading clock output terminal from CXD2545
16	SQSO	I	Input terminal to output SUB-Q data from CXD2545
17	VSS	–	GND terminal
18 \ 21	NC	–	Not in use
22	$\overline{\text{EJSW 1}}$	I	Eject key input terminal By inputting "L", executes magazine eject operation. Even when μ-COM is in stop mode, cancels the stop mode with the input of eject key, and executes magazine eject operation. (When EJSEL 31 pin: "H")
23 \ 26	NC	–	Not in use
27 \ 30	$\overline{\text{TEST 1}}$ \ $\overline{\text{TEST 4}}$	I	TEST MODE 1 (operation by KEY) selection terminal By inputting "L" when starting CPU, switches to TEST 1. TEST MODE 2 (PWB CHECK) selection terminal By inputting "L" when starting CPU, switches to TEST 2. TEST MODE 3 (DISC CHECK discontinuance) selection terminal By inputting "L" when starting CPU, switches to TEST 3. When switched to TEST 1 and TEST 2, operates by key inputs from 27-, 28-, 29-, and 30-pin.
31	EJSEL	I	ACC "OFF" eject prohibit selection input terminal When ACC is OFF and each eject key is "ON" in "H" mode, each eject operation is possible. Operation prohibit is activated in "L" mode.

No.	Symbol	I/O	Function
32	VSS	–	GND terminal
33	NC	–	Not in use
34	$\overline{\text{LDSW}}$	I	Switch input terminal to detect the chucking after the disc is unloaded from the magazine completely. "L": Disc chucking completion condition
35	LODTR	I	Disc load condition detection photo sensor input terminal "H": Disc chucking condition
36	DETTR	I	Disc presence detection photo sensor input terminal Check the conditions such as detection of disc status (presence/unpresence) in the magazine, status if the disc is unloaded completely, or status of storing it in the magazine. "H": Disc is present. Loading/unloading position
37	$\overline{\text{DLPSW}}$	I	Switch input terminal to detect position which is a reference of up/down direction of mechanism "L": Operation possible condition
38	NC	–	Not in use
39 40	LDCCW LDCW	O	Output terminal to control the motor driver for load/unload direction of mechanism Load: LDCCW "L", LDCW "H" Unload: LDCCW "H", LDCW "L" Brake: "H" Stop: "L"
41 42	UDCCW UDCW	O	Output terminal to control the motor driver for Up/Down direction of mechanism Up: UDCCW "L", UDCW "H" Down: UDCCW "H", UDCW "L" Brake: "H" Stop: "L"
43	$\overline{\text{RESET}}$	I	RESET input for the IC
44	SCOR	I	Terminal to input the signal from CXD2545 sub code sink S0 + S1 output terminal
45	ACCON	I	ACC Control input terminal. By inputting "H" or "L" when ACC is ON, μ-COM turns to stop mode to stop the clock. If "L" → "H" is detected in that condition, the stop mode is canceled and μ-COM moves to the operation mode after clock vibration is stabilized.
46	$\overline{\text{MGSW 1}}$	I	Magazine insert detection switch input terminal "L": Inserted. When μ-COM is in stop mode and the magazine is inserted, the stop mode is canceled and disc check is carried out.
47	NC	–	Not in use
48	VDD	–	+5V Supply voltage
49 50	X 2 X 1	O I	Ceramic resonator connection terminal for system clock oscillation (4.91 MHz)
51 \ 53	NC	–	Not in use
54	VSS	–	GND terminal
55	$\overline{\text{TEMP}}$	–	Signal input terminal from temperature detection circuit
56 \ 58	NC	–	Not in use
59	POSSW	I	Switch input terminal to detect position which is a reference of up/down direction of mechanism 
60	$\overline{\text{DNOTR}}$	I	Disc No. detection photo sensor input terminal Refer to the column of POSSW (59 pin).
61	DSTOP	O	Digital out control output terminal Outputs "H" in play/manual search mode and allows the output of Digital output. Outputs "L" in stop mode and the output is prohibited.
62	AMUTE	O	Analog mute circuit control terminal Outputs "L" in play/manual search mode and mute mode is canceled. Outputs "H" in stop/track search mode and mute mode is activated.
63	VDD	–	+5V Power supply terminal
64	VSS	–	GND terminal

9-1. Laser diode

The laser diode terminals are shorted for transportation in order to prevent electrostatic damage.After replacement,open the shorted circuit.When removing the pickup from the mechanism,short the terminals by soldering them to prevent this damage.

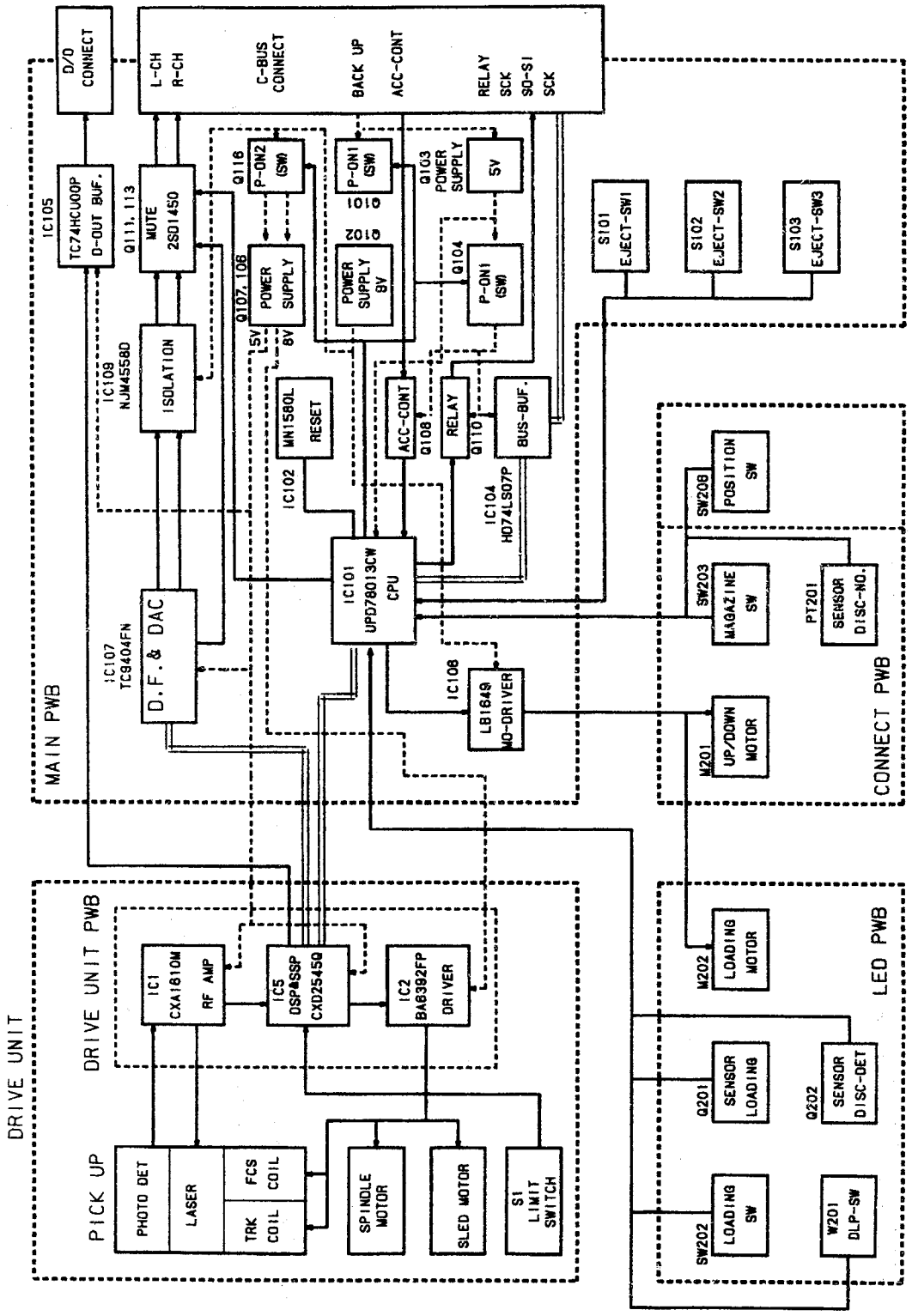
9-2. Actuator

The actuator has a powerful magnetic circuit.If a magnetic material is put close to it.its characteristics will change.Ensure that no foreign substances enter through the ventilation slots in the cover.

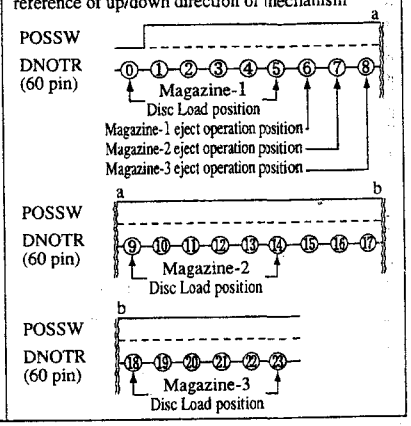
9-3. Cleaning the lens

Dust on the optical lens affects performance.To clean the lens,apply a small amount of isopropylalcohol to lens paper and wipe the lens gently.

■ BLOCK DIAGRAM



Unique points (052-5015-00)

No.	Symbol	I/O	Function
22 \ 24	$\overline{\text{EJSW 1}}$ \ $\overline{\text{EJSW 3}}$	I	Each eject key input terminal By inputting "L", each magazine eject is operated. Even when μ-COM is in stop mode, stop mode is canceled and each magazine is operated with each eject key input. (EJSEL 31 pin: When "H")
25	$\overline{\text{WAKE 3}}$	I	Magazine-3 insert wake up input terminal When ACC is OFF, magazine-3 is inserted, and "H" -> "L" is input, clock stop mode is canceled and clock become activated. When ACC is ON, the same logic with 57 pin MGSW3 is input. Therefore, when magazine-3 is inserted and ACC is OFF, 26-pin CONT 3 outputs "L" and this terminal becomes "H."
26	CONT 3	O	Magazine-3 insert wake up control output terminal When magazine-3 is inserted and ACC is OFF, outputs "L." The input of SW status of magazine-3 to 25-pin WAKE 3 is prohibited. Outputs "H" in other conditions.
33	12/$\overline{18}$	I	Switches the microcomputer to 12- or 18-CD changer control. "H": 12-CD changer control "L": 18-CD changer control
45	ACCON	I	ACC control input terminal. By inputting "L" when ACC is ON, μ-COM switches to stop mode to stop clock. If "L" → "H" edge is detected in this condition, the stop mode is canceled and μ-COM is activated after the clock oscillation is stabilized.
46	$\overline{\text{MGSW 1}}$	I	Magazine-1 insert detection switch input terminal, "L": Inserted condition When μ-COM is in stop mode and magazine-1 is inserted, the stop mode is canceled, and disc check operation is carried out.
47	$\overline{\text{MGSW 2}}$	I	Magazine-2 insert detection switch input terminal, "L": Inserted condition When μ-COM is in the stop mode and Magazine-2 is inserted, the stop mode is canceled and disc check operation is carried out.
57	$\overline{\text{MGSW 3}}$	I	Magazine-3 insert detection switch input terminal, "L": Inserted condition
59	POSSW	I	Switch input terminal to detect position which is a reference of up/down direction of mechanism 

■ PARTS LIST

Note)Several different parts of the same reference number are alternative parts. One of those parts is used in the set.

DRAIVE P.W.B

REF No.	PART No.	DESCRIPTION
C 1	163-1073-10	6.3V100 μF
C 2	176-2096-00	2pF CJ
C 3	176-2201-00	22pF CH
C 4	178-1032-78	0.01 μF
C 5	042-0423-03	6.3V6.8 μF
C 6	042-0423-03	6.3V6.8 μF
C 7	178-1032-78	0.01 μF
C 8	042-0423-03	6.3V6.8 μF
C 9	178-1032-78	0.01 μF
C 14	178-1032-78	0.01 μF
C 15	178-1042-78	0.1 μF
C 16	163-1073-31	16V100 μF
C 17	178-1032-78	0.01 μF
C 18	042-0423-03	6.3V6.8 μF
C 19	178-1032-78	0.01 μF
C 20	042-0423-03	6.3V6.8 μF
C 21	042-0397-03	25V0.47 μF TAN
C 22	178-1032-78	0.01 μF
C 23	178-1032-78	0.01 μF
C 24	178-1032-78	0.01 μF
C 25	178-1522-78	1500pF
C 26	178-4732-78	0.047 μF
C 27	178-2212-78	220pF
C 28	178-1042-78	0.1 μF
C 29	178-2212-78	220pF
C 30	178-1032-78	0.01 μF
C 31	163-4763-10	6.3V47 μF
C 32	178-1032-78	0.01 μF

REF No.	PART No.	DESCRIPTION
C 33	178-1032-78	0.01 μF
C 34	176-1201-00	12pF CH
C 35	178-1032-78	0.01 μF
C 36	176-1007-00	10pF CH
C 41	178-4712-78	470pF
C 42	178-4712-78	470pF
C 43	178-1042-78	0.1 μF
C 44	178-1032-78	0.01 μF
C 45	178-1042-78	0.1 μF
C 46	178-1042-78	0.1 μF
CN 1	074-1049-67	
IC 1	051-1971-00	CXA1610M
IC 2	051-6015-05	BA6392FP
IC 3	051-0350-55	NJM4558M
IC 5	051-6313-00	CXD2545Q
L 1	010-2155-03	10 μH
L 2	010-2155-03	10 μH
L 3	010-2155-03	10 μH
Q 1	101-1188-00	2SB1188
R 1	117-1011-10	1/10W 100Ω
R 2	117-5631-10	1/10W 56kΩ
R 3	117-1001-10	1/10W 10Ω
R 4	117-4721-10	1/10W 4.7kΩ
R 5	117-1031-10	1/10W 10kΩ
R 6	117-1531-10	1/10W 15kΩ
R 7	117-1021-10	1/10W 1kΩ
R 8	117-1021-10	1/10W 1kΩ
R 9	117-1021-10	1/10W 1kΩ

REF No.	PART No.	DESCRIPTION
R 10	117-1031-10	1/10W10kΩ
R 11	117-1041-10	1/10W100kΩ
R 12	117-1051-10	1/10W1MΩ
R 13	117-6821-10	1/10W6.8kΩ
R 14	117-1031-10	1/10W10kΩ
R 15	117-3321-10	1/10W3.3kΩ
R 16	117-5601-10	1/10W56 Ω
R 17	117-5601-10	1/10W56 Ω
R 18	117-3631-10	1/10W36kΩ
R 19	117-1241-10	1/10W120kΩ
R 20	117-3631-10	1/10W36kΩ
R 21	117-3331-10	1/10W33kΩ
R 22	117-1041-10	1/10W100kΩ
R 23	117-1021-10	1/10W1k Ω
R 24	117-1021-10	1/10W1k Ω
R 25	117-1021-10	1/10W1k Ω
R 32	117-8231-10	1/10W82kΩ
R 33	117-1031-10	1/10W10kΩ
R 35	117-2231-10	1/10W22kΩ
R 36	117-1031-10	1/10W10kΩ
R 41	032-0092-15	1/10W20kΩ
R 42	032-0092-15	1/10W20kΩ
R 43	032-0092-09	1/10W47kΩ
R 44	032-0092-09	1/10W47kΩ
R 45	117-1231-10	1/10W12kΩ
R 46	117-1231-10	1/10W12kΩ
S 1	013-3808-11	

MAIN P.W.B.

REF No.	PART No.	DESCRIPTION
C 101	173-1021-11	1000pF
C 102	173-1021-11	1000pF
C 103	183-3363-21	10V33 μF
C 104	183-3363-21	10V33 μF
C 105	183-1073-12	6.3V100 μF
C 106	184-4773-31	16V470 μF
C 107	173-1021-11	1000pF
C 108	178-1032-78	0.01 μF
C 109	042-0452-01	10V220 μF
C 110	183-1073-12	6.3V100 μF
C 111	042-0452-01	10V220 μF
C 112	172-1041-11	0.1 μF
C 113	183-1073-12	6.3V100 μF
C 114	183-1073-12	6.3V100 μF
C 115	176-1011-00	100pF CH
C 117	178-1032-78	0.01 μF
C 120	178-1042-78	0.1 μF
C 121	178-1042-78	0.1 μF
C 122	178-1042-78	0.1 μF
C 123	176-1011-00	100pF CH
C 124	178-1042-78	0.1 μF
C 125	176-5601-00	56pF CH
C 126	176-5601-00	56pF CH
C 127	178-1022-78	1000pF
C 131	178-1032-78	0.01 μF
C 132	183-1073-12	6.3V100 μF
C 133	178-1042-78	0.1 μF
C 134	183-2263-11	6.3V22 μF
C 135	183-4763-11	6.3V47 μF
C 136	178-1032-78	0.01 μF
C 137	178-1032-78	0.01 μF
C 139	176-1811-00	180pF CH
C 140	176-1811-00	180pF CH
C 141	178-1032-78	0.01 μF
C 142	183-1063-31	16V10 μF
C 143	178-1032-78	0.01 μF
C 144	183-3363-21	10V33 μF
C 145	183-3363-21	10V33 μF
C 151	178-1032-78	0.01 μF
C 152	178-1032-78	0.01 μF
D 101	001-0466-00	S5688B
D 102	001-0377-47	MA4091M
D 103	001-0503-33	HZS6B2L
D 104	001-0377-45	MA4082H
D 105	001-0377-31	MA4056L
D 106	001-0330-00	1SS119
D 107	001-0423-24	MA4091

REF No.	PART No.	DESCRIPTION
D 108	001-0423-24	MA4091
D 109	001-0423-24	MA4091
D 112	001-0330-00	1SS119
D 113	001-0330-00	1SS119
D 115	001-0377-38	MA4068M
D 116	001-0377-35	MA4062M
D 118	001-0330-00	1SS119
D 119	001-0330-00	1SS119
D 120	001-0330-00	1SS119
IC 101	052-5014-00	μPD78013CW-080 CDC(RDC)605
IC 101	052-5015-00	μPD78013CW-081 CDC1205,1805
IC 102	051-0840-10	MN1280-L
IC 104	051-0160-01	HD74LS07P
IC 104	051-0160-51	SN74LS07N
IC 106	051-1408-00	LB1649
IC 107	051-6314-05	TC9404FN
IC 109	051-0422-51	NJM4558D
L 101	010-2198-52	3.3 μH
Q 101	125-0027-01	UN6111
Q 102	102-3422-00	2SC3422
Q 102	103-1683-50	2SD1683ST
Q 103	103-1858-50	2SD1858Q.R
Q 104	100-1048-00	2SA1048
Q 105	125-2018-01	UN6211
Q 106	102-3422-00	2SC3422
Q 106	103-1683-50	2SD1683ST
Q 107	103-1858-50	2SD1858Q.R
Q 108	100-1048-00	2SA1048
Q 109	125-0027-01	UN6111
Q 110	125-2018-01	UN6211
Q 111	103-1450-50	2SD1450S.T
Q 112	125-0027-01	UN6111
Q 113	103-1450-50	2SD1450S.T
Q 114	125-2018-01	UN6211
Q 115	103-1991-50	2SD1991A-R.S
Q 116	125-0027-01	UN6111
Q 117	125-2018-01	UN6211
R 101	117-4731-10	1/10W 47kΩ
R 102	117-4731-10	1/10W 47kΩ
R 103	117-2211-10	1/10W 220Ω
R 104	117-2211-10	1/10W 220Ω
R 105	117-1011-10	1/10W 100Ω
R 106	117-1031-10	1/10W 10kΩ
R 107	117-1031-10	1/10W 10kΩ
R 108	111-1031-91	1/4WS 10kΩ

REF No.	PART No.	DESCRIPTION
R 109	111-1031-91	1/4WS 10kΩ
R 110	111-1031-91	1/4WS 10kΩ
R 111	111-1031-91	1/4WS 10kΩ
R 112	111-3311-91	1/4WS 330Ω
R 113	111-1231-91	1/4WS 12kΩ
R 114	117-2231-10	1/10W 22kΩ
R 115	111-1511-81	1/2WS 150Ω
R 116	117-1031-10	1/10W 10kΩ
R 117	117-8221-10	1/10W 8.2kΩ
R 118	111-5111-98	1/4WS 510Ω
R 119	117-1031-10	1/10W 10kΩ
R 120	117-1031-10	1/10W 10kΩ
R 121	117-4731-10	1/10W 47kΩ
R 122	117-4731-10	1/10W 47kΩ
R 123	117-1041-10	1/10W 100kΩ
R 124	117-1041-10	1/10W 100kΩ
R 125	117-4731-10	1/10W 47kΩ
R 126	117-1041-10	1/10W 100kΩ
R 129	117-4731-10	1/10W 47kΩ
R 130	117-4731-10	1/10W 47kΩ
R 131	117-4731-10	1/10W 47kΩ
R 132	117-1021-10	1/10W 1kΩ
R 133	117-1021-10	1/10W 1kΩ
R 134	117-1021-10	1/10W 1kΩ
R 135	117-1021-10	1/10W 1kΩ
R 136	117-1011-10	1/10W 100Ω
R 137	117-1021-10	1/10W 1kΩ
R 138	117-2211-10	1/10W 220Ω
R 139	117-3911-10	1/10W 390Ω
R 140	117-4731-10	1/10W 47kΩ
R 141	117-4731-10	1/10W 47kΩ
R 142	117-1041-10	1/10W 100kΩ
R 143	117-4731-10	1/10W 47kΩ
R 144	117-4731-10	1/10W 47kΩ
R 145	117-1031-10	1/10W 10kΩ
R 146	117-4731-10	1/10W 47kΩ
R 147	117-1211-10	1/10W 120Ω
R 149	117-1211-10	1/10W 120Ω
R 158	117-1031-10	1/10W 10kΩ
R 159	117-1031-10	1/10W 10kΩ
R 160	111-4711-91	1/4WS 470Ω
R 161	111-1021-91	1/4WS 1kΩ
R 163	111-1001-81	1/2WS 10Ω
S 101	013-6100-00	
S 102	013-6100-00	
S 103	013-6100-00	
X 101	060-0319-00	4.915MHz

Deferrence below are the digital-output models./MAIN P.W.B.

	Digital-output model		Non digital-output mode	
REF No.	PARTS No.	Description	PARTS No.	Description
C 118	178-1042-78	0.1 μF	———	
C 119	178-1032-78	0.01 μF	———	
C 128	176-2701-00	27pF CH	176-1001-00	10pF CH
C 129	176-2701-00	27pF CH	176-1001-00	10pF CH
D 110	001-0330-00	1SS119	———	
D 111	001-0330-00	1SS119	———	
IC 105	051-0857-60	HD74HC00P	———	
R 150	117-1051-10	1/10W 1MΩ	———	
R 151	117-3311-10	1/10W 330Ω	117-4711-10	1/10W 470Ω
X 102	061-3038-00	16.9344MHz	060-1014-00	16.93MHz

■ EXPLODEDVIEW • PARTS LIST

Deferrence below are the new models.

CD mechanism 6 DISC CHANGER(P17-18)

REF No.	DESCRIPTION	OLD type 929-0070-00	NEW type 929-0074-00
88	Side-P-Ass'y-L6	966-0406-01	966-0406-03
92	P.W.B.(MAIN)	039-0381-00	039-0811-00
114	Screw	716-0484-02	716-0484-10
126	Outlet socket	074-0927-01	074-1137-00

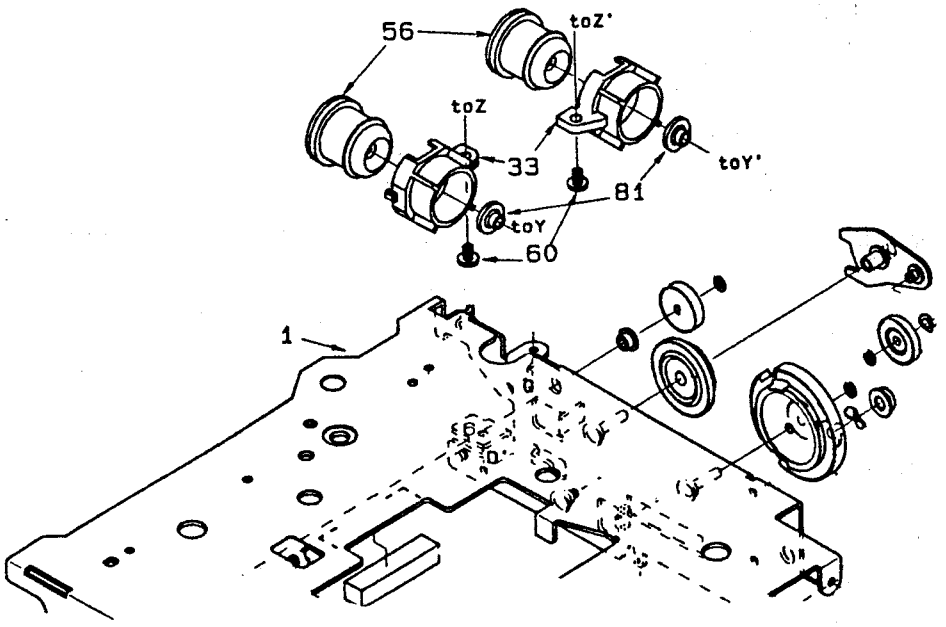
CD mechanism 12 DISC CHANGER(P19-20)

REF No.	DESCRIPTION	OLD type 929-0071-00	NEW type 929-0075-00
94	P.W.B.(MAIN)	039-0381-00	039-0811-00
118	Gear damper	629-0056-10	629-0059-00
120	Screw	716-0484-02	716-0484-10
134	Outlet socket	074-0927-01	074-1137-00

CD mechanism 18 DISC CHANGER(P21-22)

REF No.	DESCRIPTION	OLD type 929-0072-00	NEW type 929-0076-00
96	P.W.B.(MAIN)	039-0381-00	039-0811-00
120	Gear damper	629-0056-10	629-0059-00
122	Screw	716-0484-02	716-0484-10
137	Outlet socket	074-0927-01	074-1137-00

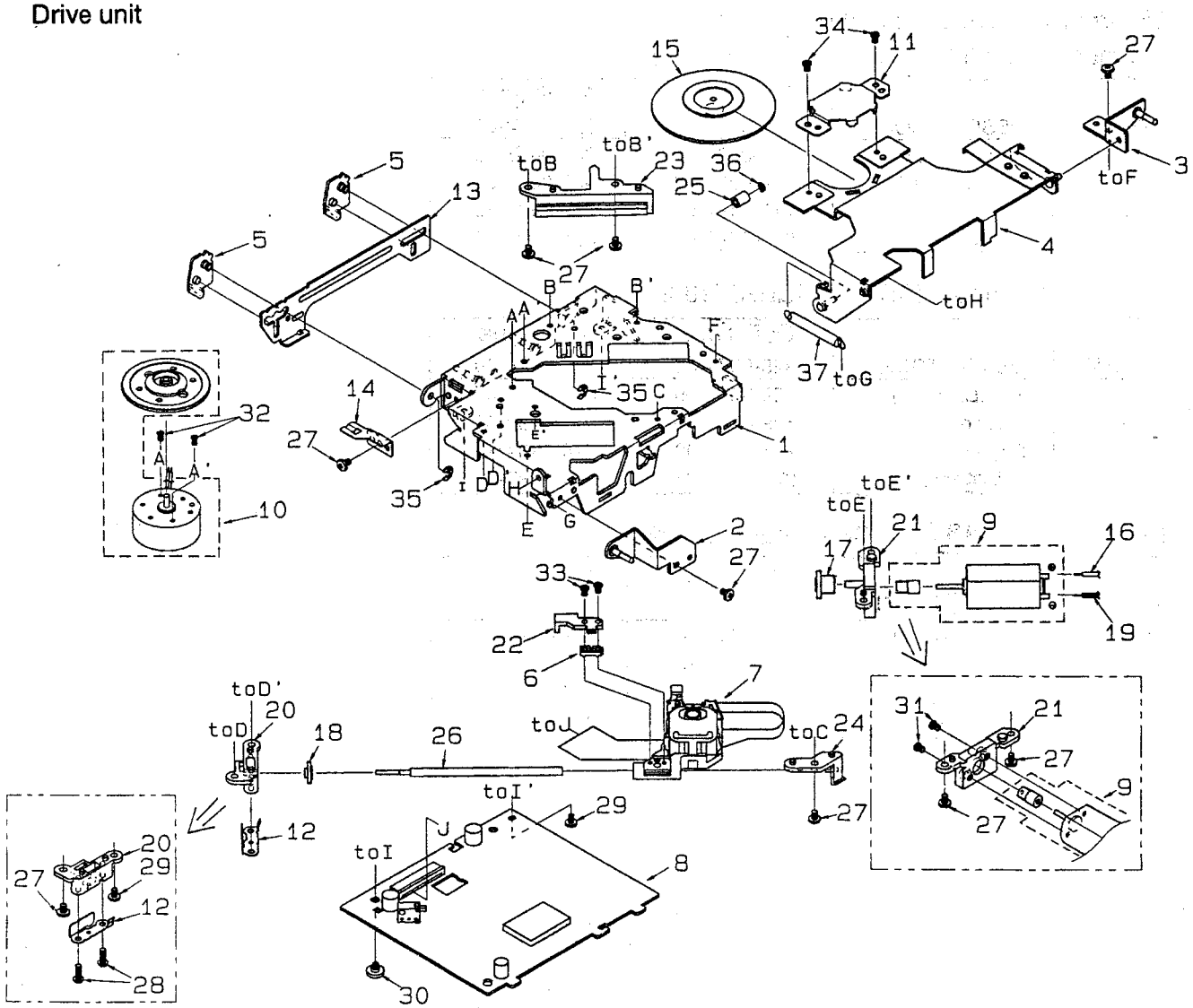
Loading unit(P23-24)



REF No.	DESCRIPTION	OLD type All units	NEW type All units
13	Drive unit	968-0070-00	968-0074-00
51	P.W.B.Sheet	345-7666-00	345-7666-01
54	Spring-H-Pin	622-1249-00	622-1315-00
81	Damper sleeve	———	621-0374-00

■ EXPLODEDVIEW · PARTS LIST :

Drive unit

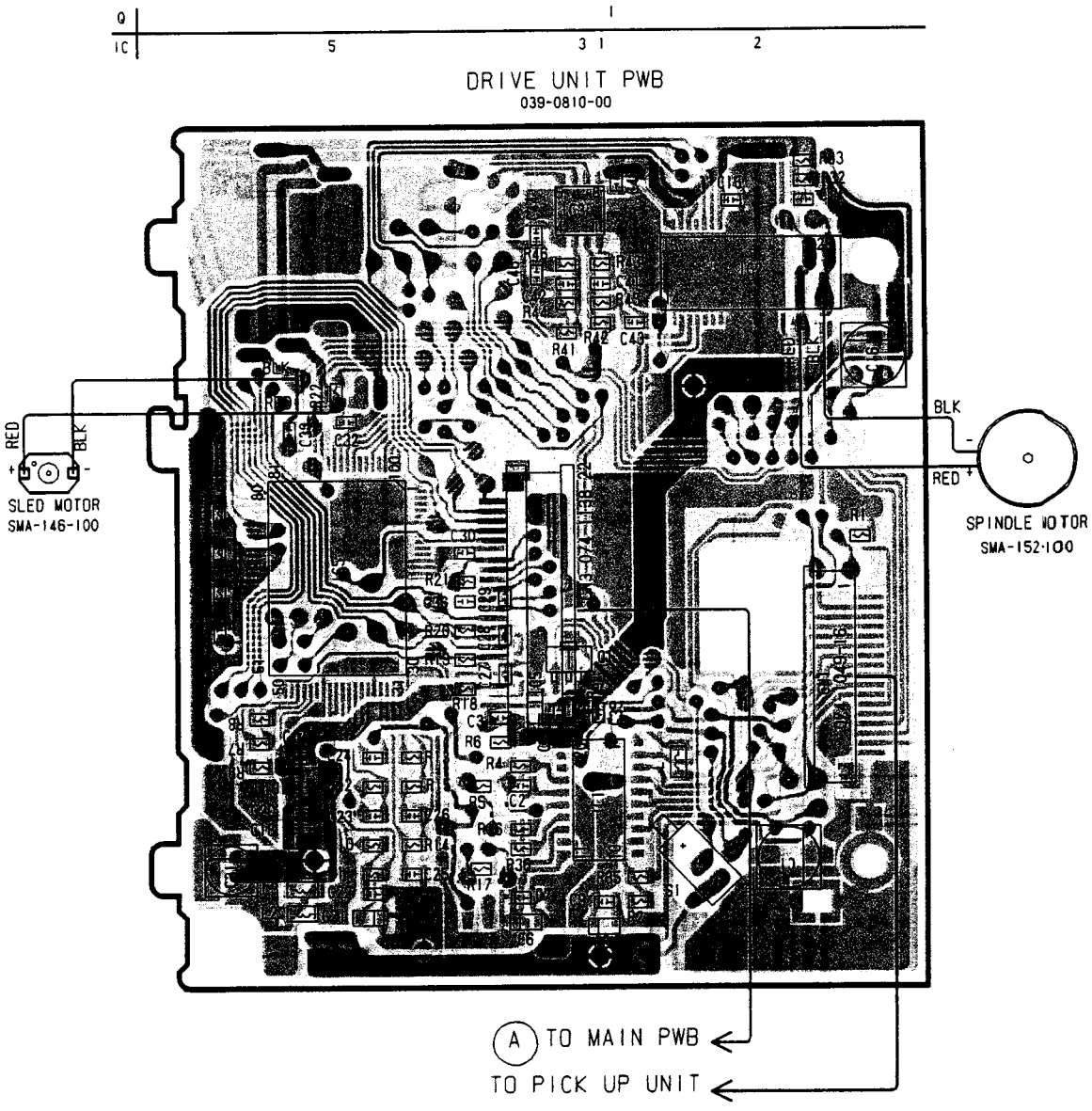


NO.	PART NO.	DESCRIPTION	Q'TY
1	966-0382-04	Drive-PL-ass'y	1
2	966-0383-00	Damper-PL-R-ass'y	1
3	966-0384-00	Damper-PL-L-ass'y	1
4	966-0385-01	Clamp link-ass'y	1
5	966-0386-00	SP-CH-link-ass'y	2
6	966-0454-00	SH-lock-ass'y	1
7	969-0050-00	Pick up unit	1
8	HBS-456-100	Drive unit P.W.B.ass'y	1
9	SMA-146-100	Sled motor ass'y	1
10	SMA-152-100	Spindle motor ass'y	1
11	620-0198-03	Clamper plate	1
12	620-0491-02	Spring plate	1
13	620-0598-00	SP-CH-plate	1
14	620-0599-00	CLK-plate	1
15	621-0231-03	Clamper	1
16	802-4908-60	Vinyl-coat-wire	1
17	621-0255-02	Second gear	1
18	621-0256-01	LS-gear	1
19	800-4907-60	Vinyl-coat-wire	1

NO.	PART NO.	DESCRIPTION	Q'TY
20	621-0320-01	LS-holder-F	1
21	621-0348-00	Motor Holder	1
22	621-0368-00	SH-Base	1
23	621-0369-00	Pick up guide	1
24	621-0370-00	LS-holder-R	1
25	622-1256-00	Clamp roller	1
26	624-0015-01	Lead screw	1
27	714-2003-81	Machine screw	9
28	716-0675-00	Special screw	2
29	716-1716-00	Screw	2
30	716-1725-00	Special screw	1
31	732-2004-11	Sems screw	2
32	716-1733-00	Precision screw	2
33	739-1735-17	Precision screw	2
34	739-2020-17	Precision screw	2
35	743-2000-20	E-ring	2
36	746-0761-00	Special washer	1
37	750-3160-00	Clamp-L-spling	1

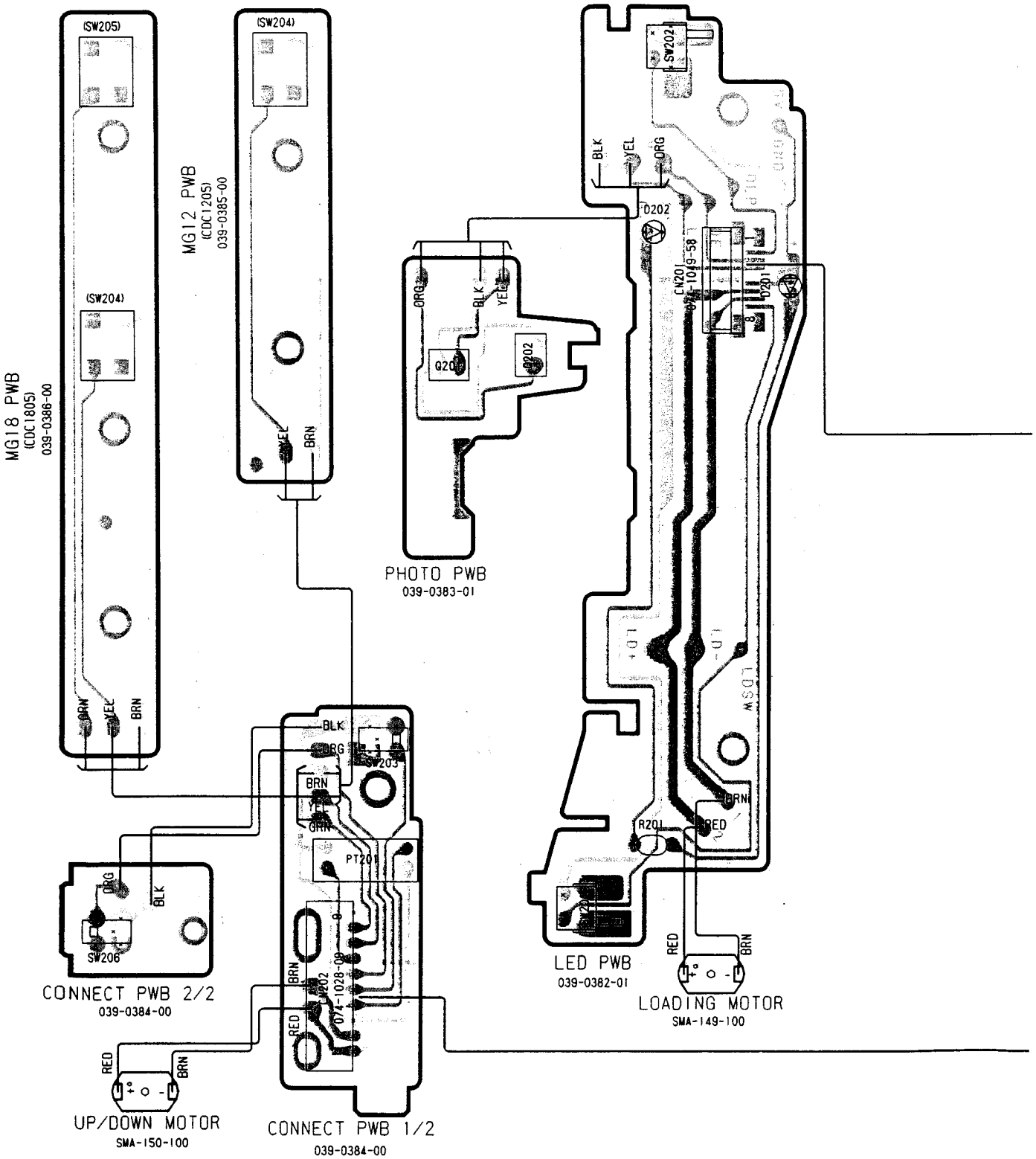
■ PRINTED WIRING BOARD

Drive unit



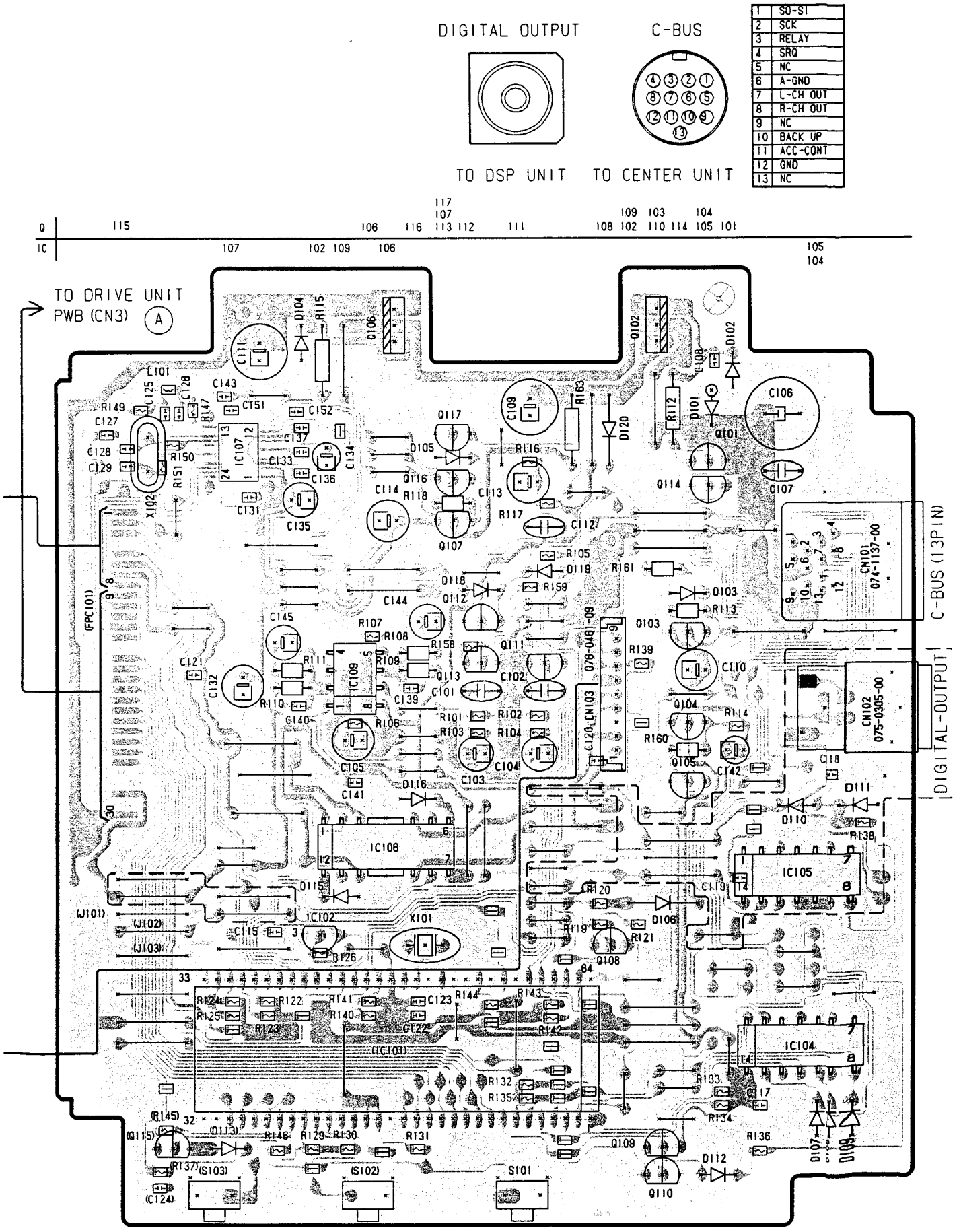
■ PRINTED WIRING BOARD

MAIN P.W.B.



NOTE ( ) : REFER TO THE FOLLOWING LIST.

	C124	D113	FPC101	IC101	J101	J102	J103	Q115	R137	R145	S102	S103	SW204	SW205
CDC605	-	-	039-0387-00	UPD78013CW-080	-	-	-	-	-	-	-	-	-	-
CDC1205	-	-	039-0387-00	UPD78013CW-081	-	-	-	-	-	-	013-6100-00	-	013-7201-00	-
CDC1805	0.1UF	1SS119	039-0388-00	UPD78013CW-081	JW	JW	JW	2SD1991	1K	10K	013-6100-00	013-6100-00	013-7201-00	013-7201-00

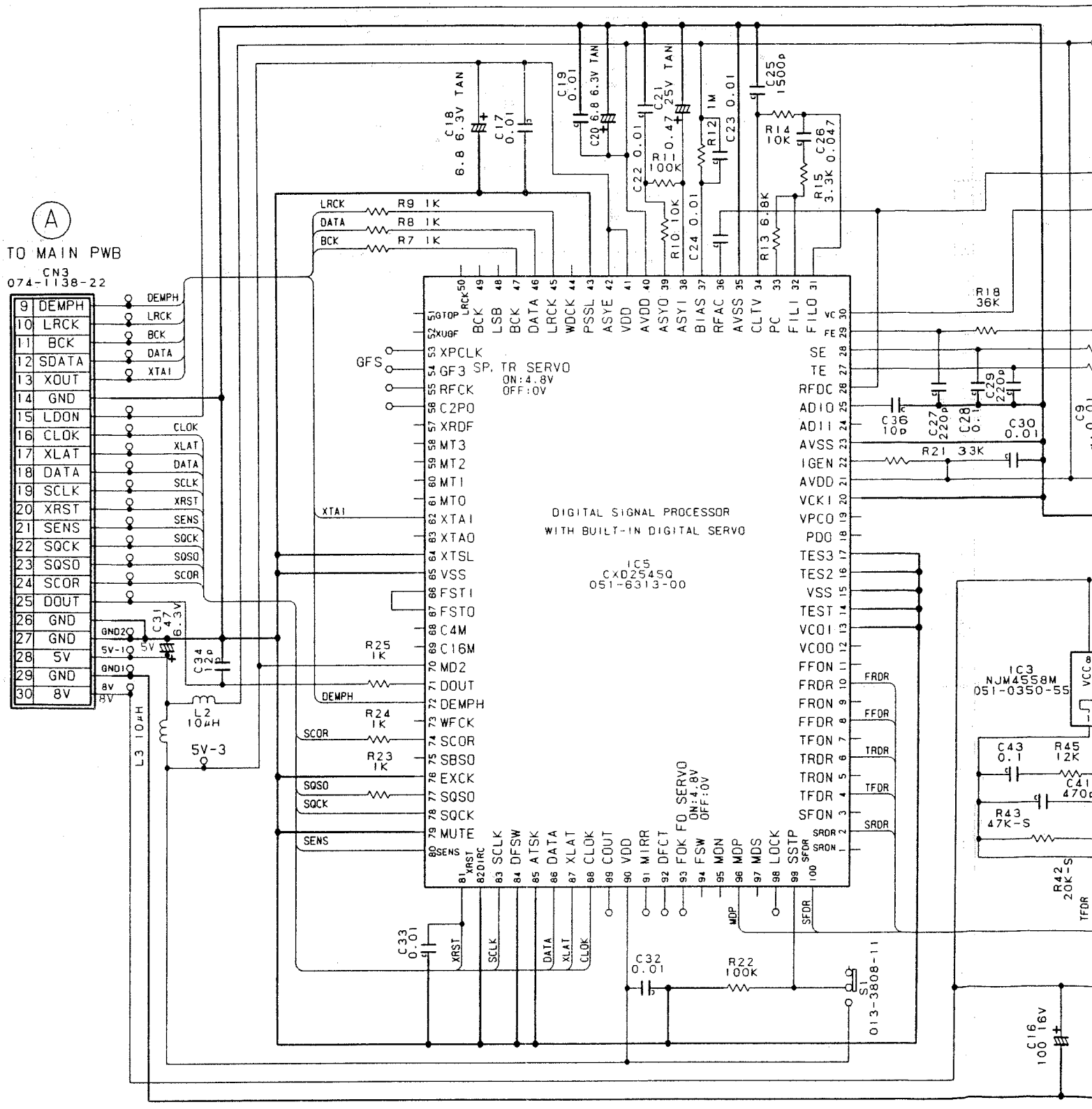


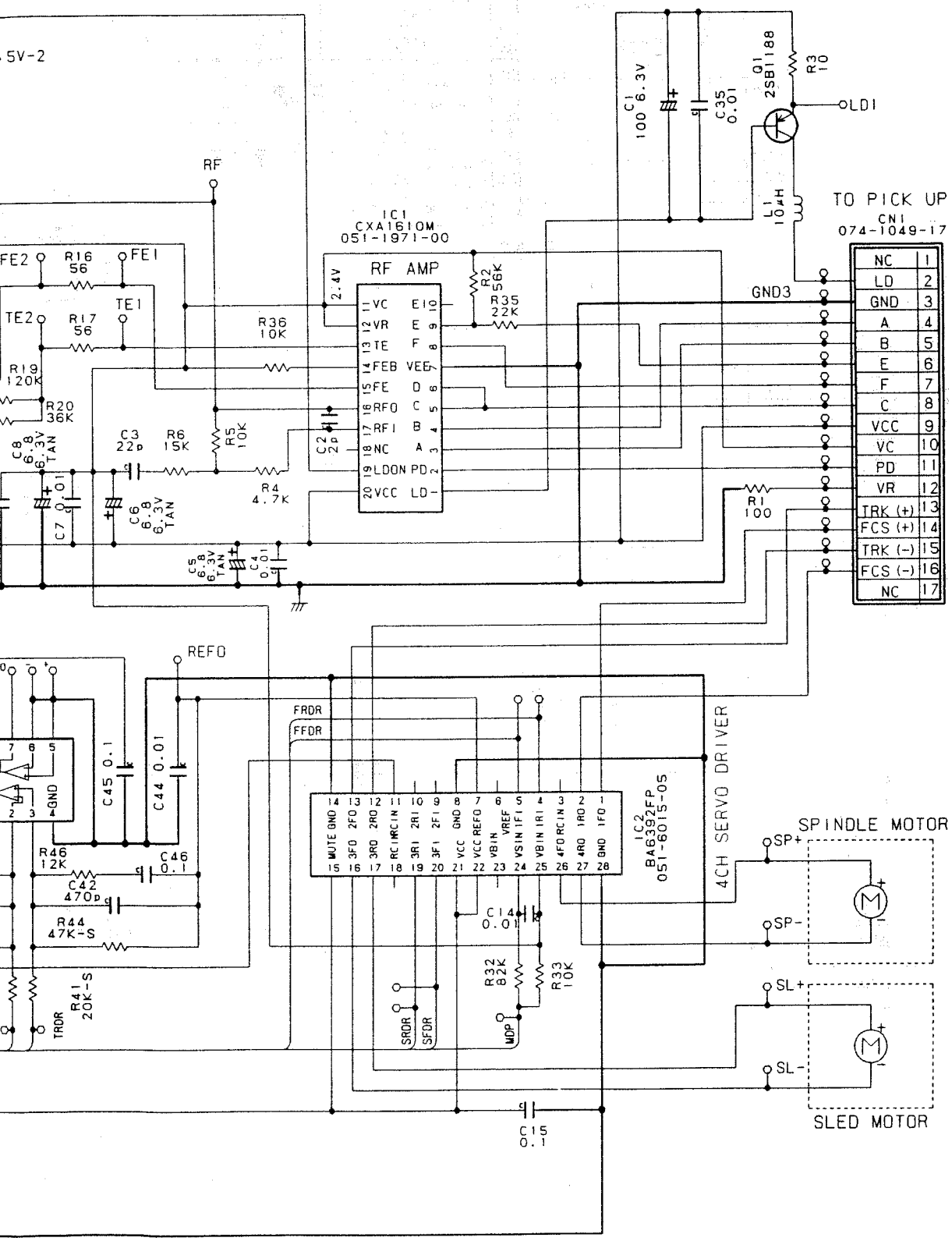
: USE ONLY THE MODELS WITH DIGITAL-OUTPUT.

CD 60 5/1205
RD 60 5/1205

■ CIRCUIT DIAGRAM

Drive unit




5V-2
RF
IC1
CXA1610M
051-1971-00
RF AMP
2.4V
VC
VR
TE
FEB
FE
RFO
RFI
NC
LDON
VCC
E
F
C
B
A
PD
LD-
VEE
D
FE2
FE1
TE2
TE1
R16 56
R17 56
R36 10K
R19 120K
R20 36K
R3 10
Q1 2SB1188
LD1
C1 100 6.3V
C35 0.01
L1 10μH
R2 56K
R35 22K
TO PICK UP
CN1
074-1049-17
GND3
NC 1
LD 2
GND 3
A 4
B 5
E 6
F 7
C 8
VCC 9
VC 10
PD 11
VR 12
TRK (+) 13
FCS (+) 14
TRK (-) 15
FCS (-) 16
NC 17
C3 22p
R6 15K
R5 10K
C2 2p
C8 6.8 6.3V TAN
C7 0.01
C6 6.8 6.3V TAN
R4 4.7K
C5 6.8 6.3V TAN
C4 0.01
R1 100
REFO
FRDR
FFDR
IC2
BA6392FP
051-6015-05
4CH SERVO DRIVER
MUTE GND 14
3FO 15
2FO 16
3RO 17
RCIN 18
3RI 19
2RI 20
3FI 21
VCC 22
REFO 23
VBIN 24
VSIN 25
1FI 26
VBIN 27
1RI 28
4FO RCIN 1
4RO 2
1RO 3
GND 4
1FO 5
VREF 6
7 8
C45 0.1
C44 0.01
GND
R46 12K
C46 0.1
C42 470p
R44 47K-S
R41 20K-S
TRDR
C14 0.01
R32 82K
R33 10K
SRDR
SFDR
WDP
C15 0.1
SPINDLE MOTOR
SP+
SP-
SL+
SL-
SLED MOTOR